HIT Policy Committee
Draft Transcript
May 11, 2011

Presentation

Judy Sparrow – Office of the National Coordinator – Executive Director
Good morning, everybody, and welcome to the 23rd meeting of the HIT Policy Committee. This is a Federal Advisory Committee, so there will be opportunity at the end of the meeting for the public to make comment, either in the room or on the telephone. Also, there will be posted on the ONC Website a transcript of this meeting, and a reminder for committee members to please identify yourselves when speaking.

Let's go around the table now and introduce the members at the table, beginning on my left with Allen Traylor.

Allen Traylor – ONC – Meaningful Use Policy Analyst
Allen Traylor, ONC.

Josh Seidman – ONC
Josh Seidman, ONC.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
Larry Wolf, Kindred Healthcare, for Ray Chapman.

Carl Dvorak – Epic Systems – EVP
Carl Dvorak, Epic.

Linda Fischetti – VHA – Chief Health Informatics Officer
Linda Fischetti, Department of Veterans Affairs.

Art Davidson – Public Health Informatics at Denver Public Health – Director
Art Davidson, Denver Public Health, Denver Health.

Paul Egerman – Software Entrepreneur
Paul Egerman, software entrepreneur.

Deven McGraw – Center for Democracy & Technology – Director
Deven McGraw, Center for Democracy & Technology.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
Farzad Mostashari, ONC.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Paul Tang, Palo Alto Medical Foundation.

Josh Sharfstein – Maryland Department of Health and Mental Hygiene – Secretary
Josh Sharfstein in the Maryland Department of Health and Mental Hygiene.

M
Welcome, Josh.

Josh Sharfstein – Maryland Department of Health and Mental Hygiene – Secretary

Thank you very much. I'm glad to be here.

Neil Calman – Institute for Family Health – President & Cofounder
Neil Calman, Institute for Family Health.

Gayle Harrell – Florida – House of Representatives
Gayle Harrell, Florida House of Representatives.

Marc Probst – Intermountain Healthcare – CIO
Marc Probst with Intermountain Healthcare.

Christine Bechtel – National Partnership for Women & Families – VP
Christine Bechtel, National Partnership for Women & Families.

Tony Trenkle – CMS – Director of OESS
Tony Trenkle, CMS.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
David Bates, Brigham and Women's and Harvard.

Judy Sparrow – Office of the National Coordinator – Executive Director
I believe we have a number of members on the telephone. Scott White, are you there?

Scott White – 1199 SEIU – Assistant Director & Technology Project Director
I am. Good morning, all.

Judy Sparrow – Office of the National Coordinator – Executive Director
David Lansky?

David Lansky – Pacific Business Group on Health – President & CEO
Yes, I'm here. Thanks.

Judy Sparrow – Office of the National Coordinator – Executive Director
And Connie Delaney?

Connie Delaney – University of Minnesota School of Nursing – Dean
Yes.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you. I'll turn it over for opening remarks to Dr. Mostashari.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
Hi, and welcome to this wonderful tradition that we have established, the Health IT Policy Committee hearings, where we come together to hear about all the wonderful work that's taken place in our subcommittees over the intervening period. Today is going to be the beginning of, as Doug Fridsma called it, the Summer of Fun. There's a whole lot of good work, important work that's going to be done on defining our health IT agenda, the policy and standards for the country over the course of this summer. I want to maybe just reflect a little bit on the issues that we're going to be talking about today and providing some context in terms of how we think about it in alignment with the principles that I hope by now we can all recite en masse.

The first session is going to be about our session of meaningful use and issues that are always exciting to think about and that dynamic tension between our two principles of eye on the prize and feet on the ground. This is an issue that has played out since the very earliest days of the discussion of meaningful use is being clear of where we want to go, having that North Star that we're aiming at, but also being cognizant of where we are today and understanding that we need to be evidence-based. We need to live

in the real world. We need to take incremental steps towards achieving the goals that we have and to really work backwards from the goals in the framework that we have. Which is a very robust framework, I think, and matches very well with our nation's goals, not just the federal government but really our whole country's goals in terms of improving the quality and safety and efficiency and care coordination and patient-centeredness of care.

I think the challenge this year, as always, remains thinking about that dynamic tension. I think it's important for us to maintain momentum, to maintain progress, and that comes in two flavors. It's maintaining the momentum of participation in the health IT movement and the health IT incentive programs. We need to make it inviting and inclusive. That means that the on ramp has to be feasible for new groups, new organizations who are just now implementing and getting their systems and getting their minds around all the workflow changes that we need to do. It's got to be something that they feel they can do. We have to shrink the change and help them get on the on ramp. But we also have to maintain progress up the escalator.

We also have to maintain progress by having our sights on where we need to be and how much time we have to get there. There's a certain slope we need to maintain in terms of the advancement of the technology, advancement of our quality measures, of our standards, of where we need to be by the time 2016 rolls around. It's important to maintain progress up that escalator as well, particularly for groups who are further along, and provide that, as we have done in the structure for this, that individual escalators where within which each group advances at a rate that they can manage. It's ambitious for everybody, but hopefully will be achievable. That's the overall way that we need to proceed, but also I think in our last Policy Committee meeting what was really, I think, a significant realization on the part of all of us was that health IT and the health IT incentive program do not live within a vacuum. They are part of a larger system of healthcare transformation that we can benefit from. We don't have to take on the weight of the world necessarily on everything.

But on the other hand, we also have an obligation to and a responsibility to support those other goals, the healthcare transformation goals, to make it possible for some of those structures that are needed for the payment innovations and the delivery system innovations that are needed. I think that the re-framing of this so that no hospital CIO feels that they have to make a choice between do I prepare for accountable care or do I go for meaningful use, that should be a false choice. We should make meaningful use the road map of what we need to do to succeed as a country and as individual healthcare providers in an environment where increasingly care is going to be reimbursed on the basis of the quality and value and efficiency and coordination and safety rather than the mere quantity. So that was I think a really important realization at our last meeting, and I'm looking forward to hearing from the Meaningful Use Workgroup in terms of the work that's been done on both those fronts since.

The other important report out we're going to hear is from the Usability Workgroup. This gets at the dynamic tension between the principles we have around using the market but also using the dynamism, the innovation in the marketplace, but also taking the minimum government action necessary to ensure that those markets work efficiently to create more perfect markets. To watch out for the little guy, but also to think about is there sufficient transparency in the marketplace and what are the minimum actions necessary that we can take as part of an inclusive process to make markets more perfect. I think the discussions in the Policy Committee around the appropriate role for government really get at that central issue, is how do we not stifle innovation while making sure that the markets work as well as they possibly can work.

Our last hearing is going to be related to our theme of putting the patients in the center of everything we do, the patients and their interests. I think it's served us so well in every discussion we've had, whether it's around adoption of meaningful use or exchange or usability, to say we understand the competing stakeholder perspectives here, but what's right for the patient? What's the best thing to do for the patient and their interests? I think on the privacy and security front it's clear that we cannot compromise on ensuring that the public, that we deserve their trust collectively and that we have done and that we will do everything we possibly can to protect their privacy and security of their information. I feel that this is a wonderful time of opportunity, we've gotten some terrific recommendations from our tiger teams, and we

are now processing those recommendations throughout the federal government. This has implications, not just for ONC but for other parts of the federal government as well, and under the leadership of Joy Pritts, our Chief Privacy Officer, we're really making wonderful progress on taking this to the next step.

So it's an exciting time. I think we've come a long way in the past two years and we're hitting our milestones, but this is a marathon, not a sprint, and with your help we'll get there. So I want to thank everybody and just acknowledge that our final principle is the open and inclusive and transparent processes, and that's what makes this whole thing possible, so thank you.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Thanks, Farzad. Terrific opening statements about the context, and I hope we carry that context with us as we go certainly through the meaningful use report out. I may disagree with you about the sprint. It's a constant sprint here.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
A marathon of ... sprints.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes. Normally, Judy, and I don't know whether I missed it, but she says this is the 155th time we've been meeting together and so ... it's to remind us about the sprint nature of this, but I think it also provides a lot of excitement. It means that the office and the secretary are really intent on getting this stuff to work. It's the external sprint in the market demands that we're trying to meet as well—not just the legislation.

Farzad has reviewed the agenda and since I do have to go through the minutes, and I hope all of you have had a chance to look at the minutes and would entertain a motion to approve them. Okay? Second?

M
Second.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Any other further discussion, omissions, edits? All in favor?

All
Aye.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Any opposed or abstained? Thank you. With that, I think, Mr. Chair, if you want to move into the meaningful use report out. I'll switch chairs, switch hats.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
While you're doing that we introduced Josh in absentia at our last Policy Committee meeting, but I want to, again, welcome Dr. Josh Sharfstein, who is the Secretary of Health and Mental Hygiene for the State of Maryland and will be representing one of the public health slots that are appointed by the secretary to the Policy Committee. Previously he served as principal deputy commissioner at FDA, where I had a chance to work with him and continue to marvel at his passion, his commitment, his clearheaded thinking and judgment and his sense of humor, so welcome, Josh, to the Policy Committee.

Josh Sharfstein – Maryland Department of Health and Mental Hygiene – Secretary
Thank you. I was just saying that my job in Maryland now covers both healthcare finance and healthcare reform and public health. I think the point that you made, Farzad, that getting the health IT really rolling is extremely important for health delivery reform and the things that have to happen in the healthcare system to align the healthcare system more for health is extremely well taken based on the experience in Maryland. Then there's the public health side, where there's just tremendous opportunities in pulling together the kind of data that health information technology can do individually. As well as at the state level we have information exchange getting set up in the state, with just tremendous opportunities to both

understand what's going on in the health of the population and then intervene in a way that people appreciate and winds up saving people from illness and death. It's really a tremendous moment and I have been a huge admirer of yours, and ONC, I think all of you should take pride in the fact that this is really seen as an effort that is moving forward and that will bring tremendous benefits for health in the United States. Thank you.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
Thank you, Josh. With that, we turn to Paul and George and a report out of the Meaningful Use Workgroup.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Thank you. I want to begin with an acknowledgment and an appreciation of thanks to the members of the workgroup who have been with us through thick and thin for the past couple of years. It's really been a terrific group, dedicated, we spend lots of time together and on the phone, and people are really vested in making sure we do as good a job as possible in making this the right thing and fitting really the context that Farzad laid out for us at the beginning of this meeting. Today, the work we have before us is, one, we'll review with you the timeline we have for developing stage two recommendations, go over, at least at a high level with a chance to give us your feedback on each of the draft recommendations we have. Give you an update and a revelation on the timing options, because I think there's sort of a win-win position we have there in terms of giving people a chance to adopt the electronic health record systems and use them meaningfully. While keeping that escalator going at a fast enough pace to meet the needs of health reform and then conclude with next steps.

Just to remind you, in 2010 we had a number of hearings dealing with specialists, state issues, healthcare disparities, patient and family engagement, population and public health care coordination that we used to put together an initial draft recommendation that we presented to you in December. Then with your feedback we put out a request for comment that came back at the end of February. The staff at ONC did a tremendous job in summarizing those comments, got them back to us, we've been working on those since and we're now going to be presenting to you our draft stage two meaningful use recommendations for further feedback from you. We do have a hearing in two days to learn more from the specialists and some early experience from the field, and we'll then ... incorporate all of that input and bring it back to you at our next meeting on June 8th for final approval. So we'll begin, and I think what I'd like to propose is that we go a screen full at a time. Obviously, there are a lot of objectives stated here, so we'll go through a screen full, pause, give you a chance to react and make our way through it. Now, there are five categories, so we're going to have to pace ourselves, so that may be the only caveat to offer.

The first one is in the category of improving quality, safety, and efficiency of healthcare while reducing the healthcare disparities. In front of you on the left is the stage one final rule and then on the right is a combination of where we propose to you in December, which is illustrated in black. There are new objectives that were not present in stage one that's indicated in blue, and finally in red is our change made as a result of your feedback plus the feedback from the public. If you read it all with ... then you'll see what our actual proposed stage two recommendation is, at least in the ....

The first one is CPOE, or computerized provider order entry. You'll recall that in stage one we had a threshold of 30% and only included basically medication orders. We'd like to move, the public was very accepting and receptive and supportive of us moving up the threshold from 30% to 60%. Now, just a comment on thresholds, a threshold is basically a floor. It's certainly not intended to be a ceiling, and we fully expect that once people start on that escalator being in a hybrid state of partial electronic, partial paper is a really painful place. So it's in nobody's best interest, and certainly not the patient's best interest, for people to stop on that escalator. That's part of the rationale. I don't think in our public feedback people were not thinking that going from 30 to 60 was a very big reach and everybody wanted to do that anyway.

So what we did do was we added lab and radiology. ... that CPOE is that time when the system can provide you additional information and alerts and reminders that would help shape the orders to be the most appropriate and beneficial for the patient, so the more orders that are encompassed, the better.

Adding lab and radiology are important orders and important things that affect the care of an individual. In the lab we would apply the same threshold, that now being at 60%, and in radiology there are specialties where you don't order any lab, radiology procedures, and so they would essentially be excluded. We started using the notion that we'll do some countable number, again, recognizing that once people have the connections set up, place a radiology order, if ... they're going to say, oh, we've done that, we're going to turn it off. Basically in order to avoid some of the unintended complications and the burden of counting things for denominator we're using counting as a part of defining our objectives. So in radiology then we're just saying you can do this and it benefits by having one order sent.

Drug-drug interaction has always been a problem for us, as you know, that it's a very common function and there are medication databases, but also the common problem is a very high false positive rate. In other words, alerts that the providers do not think are relevant, and that does a couple of things. One, it just becomes more of an annoyance rather than being of help. The other is it starts desensitizing providers to alerts in general. So that's not a good thing. Ideally, and let me point to stage three, there would be some publicly maintained lists, that's not necessarily ... but there are some lists that become essentially the standard practice so that it is of high value, high positive predictive value. That does not exist now and we're not confident it will be in existence by the time stage two is in.

So that's our stage three goal. What we do want to help providers with, though, is a way to refine the alert, the drug-drug interaction alerts that are fired in their system, so that it can be tailored to have a higher positive predictive value. That means not just accepting that which is in the commercial medication databases, but being allowed, through your own local processes, to try to refine the alerts that fire so that it is of more value. That's what we're trying to shoot for in stage two. Carl?

Carl Dvorak – Epic Systems – EVP
... question ....

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Why don't we wait until the end of the screens and then we'll open that up? The next one is generating ePrescribing, in other words, transmitting that information electronically to a pharmacy. We had that in place for outpatient medications and we've just modestly increased the threshold from 40% to 50%. What we did in stage two is to add hospital discharge prescriptions to that list. Initially, it was at the same rate and we got a lot of pushback and public comment saying, gosh, this is a new function, it's actually even a new function in the EHR, could we start out with something lower? The other thing is clearly patients who are being discharged from the hospital don't always know exactly where they want their prescription sent, so by preference they may very well want to have it on paper, so we lowered that to 20%.

Demographics is the next item, and what we've done is we've gone from 50% to 80% and we would like to move towards more granular ethnicity data. After our stage one recommendation came out, the IOM had a study that was reported out that recommended using more granular ethnicity data because you need that kind of information, both to understand the cultural background of the individual as well as its contribution to their health risks. So we are moving towards that direction but we recognize that the IOM report said this is the direction we should go, but we do need standards set and had recommended that HHS produce those standards. We need to do a little work in saying well, what would be possible by the time stage two is in effect? But that's the direction we want to go, whether it's in stage two or stage three.

The remaining three on this slide are unchanged from our previous recommendations and pretty much are unchanged from stage one. Let me know open it up for comments and questions on this screen full of objectives. Carl?

Carl Dvorak – Epic Systems – EVP
My question, although I think a little bit more tactical in nature, is with regard to the recording of reason for override on the alert. Would it be possible to try to get that list of overrides, if there were to be a nationally standardized list, as soon as possible? I think many systems record an override reason today, so if we can get that ahead of time we might be able to avoid some change management problems.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes.

Carl Dvorak – Epic Systems – EVP
... agree with that one?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes, those are excellent suggestions. Our process is to move this along to the HIT Standards Committee. They should either ... something, I don't think it exists in this case, or try to help cause things to happen in that direction.

Carl Dvorak – Epic Systems – EVP
Remember, that's stage three.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Although the sooner we get that list—

M
Yes, yes, we want to start now ....

M
... switch the list ....

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Right, absolutely. Tony?

Tony Trenkle – CMS – Director of OESS
Just two questions, Paul. Is the denominator still going to be unique patients? Do these both apply to Medicare and Medicaid EPs?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
It was intended to apply to both. Was there something we should be considering?

Tony Trenkle – CMS – Director of OESS
Well, just the fact that it really will be earlier in the game for the Medicaid side and the Medicare, so that's the question whether it should be the same bar for both.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay, that's a good point. The other one was unique patients, and were you referring to a specific objective?

Tony Trenkle – CMS – Director of OESS
Well, for a number of objectives we differentiated on the denominator and a number of them we put unique patients, so you've got to continue that, even if you raise the bar you're going to keep the denominator the same, is that pretty much—

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
... keep the denominator the same. Now, in some cases we may go over to the concept of "active" patients, and unfortunately we still haven't defined that yet. The reason is over time you're going to have an increasing number of patients in your database and is it relevant and do you have a chance to interact with them. That may be the question. Farzad?

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
Later on, on slide 12 there's going to be I think a nice presentation, a visualization of the personal escalator concept, and I think, Tony, we should remember that a lot of the Medicaid folks will still need to

only be at stage one. Unless specifically mentioned otherwise, what is being presented is what the requirements would be for stage two, in other words for people who have already been at stage one for some time period. I think, as you point out, most of the Medicaid providers will be in AIU in the first period and will be stage one meaningful users, so presumably would have a lower bar to meet.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Marc?

Marc Probst – Intermountain Healthcare – CIO
Just a couple of comments, and thanks for going through this. This is very helpful. The first one is just percentages in general are a challenge, particularly when you start talking about labs and you've got point of care systems, so you are in a transitional period where you're going from automated and manual orders trying to create a denominator from that. So I think to the degree we can avoid percentages—and that's just going to be a general comment through everything we're looking at, that's helpful. Because I'll go back to what you said earlier, Paul, I really do think that once people have these in line they're going to want to use them and they're going to want to ... in them. But the impact of trying to create that denominator can be a big challenge. Then, the other thing will be definitional, and again as we go through a lot of the requirements that are there, there are terms that are either new or could be taken as ambiguous, like refining an order. I'm not sure exactly what that means through the process and I think the more specificity we have around this it will just take some of the ambiguity out. So those are the comments. Thank you for these.

M
Just to clarify on the denominator on the first one, so for medications it remains unique patients with at least one med on the list. For lab it becomes unique patients who have at least one structured lab result in the record. Then you need to have at least one order on 60% of those patients. That's how it's written, just so you understand. Maybe it needs to switch to counts, but that's where it is now.

Marc Probst – Intermountain Healthcare – CIO
Yes, and I don't think I was looking for an answer as much as a concept that we did take into mind that there's work to be done and it's changing workflow of physicians.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Gayle?

Gayle Harrell – Florida – House of Representatives
Thank you so very much, Paul. I'm a little concerned about the CPOE on the lab situation as well. I think in our small communities we have a lot of local labs in our rural communities, I know in Florida we have a lot of small communities with local labs, and I don't know that our small labs are going to be ready and our providers in those communities may not be able to transmit that order electronically. Now, if you're just going to do a paper order through your record and hand them that, that's one thing. But if you're talking about having it transmitted, I want to clarify where we are on that, if it's simply just producing it through your record, that's one thing.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
It is okay to produce it from your record and actually give a printout to the patient. The idea here is to have the benefit of the system input as you're entering the order.

Gayle Harrell – Florida – House of Representatives
Correct. Okay, I just wanted to clarify and make sure that that was—we also don't have the HIE set up to be able to do that.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
... number.

M

A very general comment or question and then a much more specific—maybe I'll do the very specific one first. In the demographics piece, I appreciate your notion that we have to actually get feedback on what's available for standards and move ahead as that becomes available, but I'm wondering if maybe the notion of tying them to stratified reports actually should wind up somewhere else. That this should be split into two parts, that we're going to be collecting enhanced demographics and then we'll be looking at having them available for reporting. We do have that, so later on you'll have the stratification by the ability to report on patients and the purpose here was to stratify them by something very .... I understand you pointing ahead, but I think in terms of trying to keep each of these as clear and focused as possible might be good.

Having said clear and focused, I'm going to ask a really general thing. When we first went into this we had an umbrella notion that the stages, we'd start with stage one, was about getting initial use and starting to collect data, stage two would focus on exchange, stage three would focus on improving outcomes, vaguely, that's my memory. Has that been a useful framework as you've worked on these? Do you think you've actually been able—as we go through them is that actually a useful reference point that obviously we're enhancing use? So in the first one we're saying we want to expand it to more areas, but given the issues around interoperability it sort of feels like that's going to be a huge hurdle when we get there.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Absolutely. We are sticking by those general three areas. My good colleague, Dr. Hripcsak is going to be covering the care coordination category, where we're going to see a lot of that. We're going to be in that tension, as Farzad described, where we've got to understand where people are but we have to get them on an escalator to places where the country needs to be from a health reform point of view. So we constantly battle with that, and I think we're looking for your feedback on where we ended up, at least today.

M
I guess what I'm wondering is maybe something we really can't comment on until we've seen them all, walked through them all, is what the balance ought to be. Would it be better to narrow the focus on some of the use in the data, and focus more on being able to exchange what we already have, or are there key things missing that, yes, exchange is technically possible but it's not actually clinically valuable if we don't have this other information.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
We're looking for your feedback on this very thing. In our face-to-face we tried to take a step back and say what is it? I don't think our work is done yet, and I think after we hear from you today and the specialists in a couple of days, we'll have that much more to come back at. But still that's going to be front and center for us in terms of is the right balance and the right things what we have in stage two.

Other things before we move to the next screen? Paul, sorry.

Paul Egerman – Software Entrepreneur
Thanks. I just had one observation, which is the drug-drug interaction, the ability to record reason for overriding an alert, we just did have our usability hearings and we got a lot of comments about the number of keystrokes it took to do things and how one implements that capability is very important. So somehow if this is going to be something that we think is important to include, there needs to be also some direction given to the Standards Committee to find a way to implement it without adding additional keystrokes to absolutely every alert that occurs in CPOE, because I think that will drive everyone nuts.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I totally agree. The way that you trade with the user in terms of for this extra keystroke what do you get in return and what do you get for patient care—if you use the reason for override and find out that oh, once I put it in once that doesn't come back to haunt me in the future. That's one good payment for that extra click, as an example. The other one that's key is the organization and the system's ability to learn that oh, maybe this alert isn't a good alert. In other words, really some fantastic work done at the University of

Utah on how guidelines, when you put them into place you find out all the things you didn't consider. So a guideline, it actually turn out when you put it into clinical decision support to be actually very poor, but if you have this kind of feedback you become very good in a very short period of time. So that's the value, and once the users understand if there's an exchange, if I do this ... this system then I get this in return, they tend to forgive you. But your point is certainly well taken, that usability has to come in every time we want to add something, particularly work to the user. Thank you.

Anything else? You can still make comments after we finish, but we're trying to take this a screen at a time because to get to some of your more difficult comments.

Moving on, still in the same category, the next piece didn't change either, which was maintain an active med allergy list for 80%. That remains the same. Then we go to vital signs, and this is just really almost a technical correction, we ask for vital signs to be recorded and for pediatrics we were informed that really for 2-3 years of age blood pressure is not so relevant, so we just made that technical correction in stage two. Smoking status, the new thing here is to signal in stage three, as you know, secondhand smoke is also extremely important. A standard for that just doesn't exist yet. We wanted to signal so that those standards could be developed by the time stage three arrived, so we're staying right now at firsthand smoking.

The next one is clinical decision support rules. We had put out a series of attributes thinking that instead of specifying you need to do one of these kinds of alerts and one of these kinds of rules, we would leave it to the systems and the providers to decide which ones are most appropriate for their practice. We had some public comment that offered changes to our wording and attributes, which we accepted because they seem very appropriate. I'll just quickly read through those. An EHR provides a method to explain to the provider the source and citation of the CDS. That EHR allows rules to be configured to enable decision support based on the patient's context, i.e. clinic visit, currently admitted, those kinds of things; that response information of the chart about the patient's problems, allergies, medications, demographics and vitals basically being patient specific. That the rules be configured to present decision support at a specific point in the clinical workflow, so "bothering them at the right point when it's of most value to them and when they can react to it in an informed way." Fifth, that it be configured to present decision support to users of certain roles, so a clerk isn't going to get a clinical alert back, for example, yet an MA or a nurse that may be able to act on something can get that alert; and finally, that it be integrated with other applications in the EHR functionality.

We thought that those were helpful edits and accepted those. Once again, by having these sorts of attributes you're allowing lots of innovation to occur in terms of trying to support the user with making clinical decisions.

Next, in all of the cases we did follow the final rule's intent, that menu options would be turned into core. So the drug formulary check, which was menu in stage one, we would recommend moving into core and recognize that although currently not everybody has formulary information, at least from the payer point of view on every patient, there are ways that you can deal with this locally by saying well, what are the most important things in the payer environment in which you operate to make some changes. So that's why we added "according to local needs." These can be either internally generated formularies or ones that are supplied by payers.

Advanced directives, as you know, continues to be challenging in terms of trying to get it just right. In stage one there was a menu option, 50% of all unique patients 65 or over and what we did was we left it the same for hospitals in terms of the threshold but added to it. You should indicate whether the advanced directive discussion has taken place. If it has, what's the result? Because our end goal is you really want people who need to know this information to have the actual signed document in front of them. That's the end goal. We're trying to move in that direction for hospitals. It's clearly very important when you're in the hospital. That's where a lot of things can happen to you, some of which are good.

We would also like to move, because this truly is a discussion where you have an ongoing relationship, we would like to move it over to the EP side. From a timing point of view it's hard, because you may have

a discussion, there's time to think about it, and even if you've already thought about it and you have a document even signed, when does it come into your office to get "scanned in." For all those reasons we decided to start moving in the direction of EPs fulfilling the same requirement, but we chose a low threshold like 10%, and because, now, here's the difference between the unique patients, because you can only touch so many people at a time, we've put as the denominator the people you saw during the reporting period. Otherwise, you'd instantly have to have 10% of your entire database of patients. So that's the approach we took there. We would like to get, and I'm not sure how we're going to get this information, we'd like to know what's the state of the practice now, how many of these ADs do practice ... even in paper format, so we know what an appropriate threshold is to set for this.

The next one is the lab test results and structured format. It was a menu in stage one and we're moving it into core. One of the caveats is we want to make sure that to the extent possible you use LOINC codes, because that's one of the approved standards that does help EHR systems take advantage of that information and operate it, and particularly with clinical decision support. What we're adding to it is based on the feedback we've heard. So a lot of provider offices get their refer to hospital lab systems, and whereas we do not have control over the commercial labs, the hospital labs are part of meaningful use and we would like them to be sending lab results back to the providers in structured format and tagged with LOINC codes. So that seemed like one of the areas where we could help the providers get this information in structured form in a standardized code set.

Let me open this screen full of criteria for discussion. Carl?

Carl Dvorak – Epic Systems – EVP
Thanks, Paul. On the hospital labs, would it be possible to clarify the 40% of labs sent? One thing that occurs to me is it would be nice if it were some percent of the results for orders received electronically, so if I receive an order on paper it's not part of the "send it back electronically" because that adds a lot of person time to try to get the return address correct and such. So I'm curious if you can modify that last one to have the set be a percent of those orders received electronically are sent back, structured electronically. I didn't know if it meant 40% if I send electronic, but it's not structured? Are we looking for 40% of what I sent back electronically to be structured, or at least 40% of the orders I received to be sent back structured?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think the intent of this may be something Tony can help us with. The intent was of the tests that you get back, 40% are—I was going to say structured but I'm not sure that's—

Carl Dvorak – Epic Systems – EVP
Yes.

Tony Trenkle – CMS – Director of OESS
Yes, I'm not sure. I could check on that.

Carl Dvorak – Epic Systems – EVP
My suggestion would be to hold the hospitals accountable for returning orders electronically where they're submitted electronically. Then secondarily, I'm curious about whether it's meant to be all structured or only if a portion of those returned electronically are structured.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Here's what I think the intent was, and I'm starting with how well it's defined. When you submit a lab, and this is to help with the counting denominator, if you order a lab electronically then 40% of those should be received back electronically and in structured format. Now—

Tony Trenkle – CMS – Director of OESS
And I believe that's correct.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO

Yes.

Carl Dvorak – Epic Systems – EVP
Then one other question, it says, "LOINC where available," so LOINC is universally available, right, so there must be an implication there that one or the other supports LOINC and if the other doesn't then you don't have to?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
No, the question was not all test results have a LOINC code.

Carl Dvorak – Epic Systems – EVP
Okay, got it. So you might want to clarify that as well.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Marc?

Marc Probst – Intermountain Healthcare – CIO
Thanks. Just a couple of quick ones, on clarification on CDS, we're talking about, and this comment in there was looking at certification, we're certifying the functions of a CDS not the content, right?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct.

Marc Probst – Intermountain Healthcare – CIO
And then, are there standard advanced directive codes, has that been defined or is that unique to facility state or whatever? It's probably an unfair question.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think it's just a .... David?

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
Yes, I don't think that there are standards. I think this is something that we should ask the committee for. There are, within organizations, we have a set of standard codes, and I suspect lots of others do, but ... work.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay.

W
Paul, the answer in this specific case is that the code is yes or no, it exists or it doesn't. Then if it exists what we're asking for is a scanned in copy of it.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Currently it's only yes/no the discussion's taken place, and if yes—

W
Not even that, though. Not even the discussion's taken place. There is or there isn't an advanced directive. It exists or it doesn't. We're not facilitating the discussion necessarily. Does that make sense?

M
That's not what this says, though.

M
That's not what it says.

W

That's what it says—

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Right.

W
Yes. Oh, okay.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
... for more than—

W
I think this was a hold over that we agreed because of all of these issues that it is either presence or absence, and if presence is yes what we call ... results, but what we came about in the workgroup to defining was there's a scanned in copy.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
We felt that no one would act unless they really had the document in front of them, the signature and what did they sign, and I think David Bates is referring to the content. There are probably ways to characterize what the wishes are.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
And from the clinical perspective it's extremely valuable to have that, so we should ask standards for it. But I think Marc's right, that that does not exist today.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Gayle?

Gayle Harrell – Florida – House of Representatives
Thank you. I want to go back to the last thing, again in our rural community, and if we're going to make this a core, not a menu option, we have to be very careful. If you have to have 40% of your lab results come in, you have many labs who don't have the capability of sending it to you in a manner, you get a written report back, you don't get structured data back. Then you're going to have to hand enter it, which becomes problematic. We're getting away from that kind of thing. I think we have to be very careful how we do that, especially in our smaller communities. My preference would be to see that stay as a menu option. Also, I think if we're going to move towards LOINC we need to send a real strong message that LOINC needs to be the preferred element, the preferred mechanism for doing this and pushing especially our hospital labs towards that.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
That's certainly our intent. I think David Bates had a comment.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
I think that even in smaller communities there are a few labs who have a pretty large proportion of the business in almost all settings.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes, the feedback we got was that most of the commercial labs are doing this, and that's how we move to that—

Gayle Harrell – Florida – House of Representatives
That's not what I hear in Florida.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think Paul Egerman and then Larry.

Paul Egerman – Software Entrepreneur
Thanks. I had some questions about the advanced directives. The 50% for hospitals, is this for hospital inpatients?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes.

Paul Egerman – Software Entrepreneur
If you're in an emergency department, you don't need to have advanced directives.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct, it's inpatient.

Paul Egerman – Software Entrepreneur
And 10% of the EPs concerning issues with specialists, if I go to my ophthalmologist I don't expect him to find out about advanced directives on me.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
This is why I think Tony signaled to us you know you guys had better look into—

M
We're still working on it.

Paul Egerman – Software Entrepreneur
The intention is good but it just strikes me that the implementation's very difficult.

Tony Trenkle – CMS – Director of OESS
Yes, that was the problem we ran into last time was what applies to all across the board or whether some might be ophthalmologists where it might not apply. That's a good point.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Then some of the points that were raised in public comment, well, this actually even might be okay for ophthalmology provided we have the HIEs in place and you know that it does exist, so we're in this betwixt and between time.

Tony Trenkle – CMS – Director of OESS
If the HIEs are in place, that's a ... story.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes. Christine?

Christine Bechtel – National Partnership for Women & Families – VP
Paul, part of our thinking originally was it was actually akin to the smoking status being recorded, which would be recorded by all specialists as well because it was really about supporting in conversations and getting more advanced directives or conversations about tobacco going in the healthcare system and then moving that data around. So I agree this needs more work. It was a specific question that we asked in the RFC and I think it's worth—I'm sure the staff have but I'm not sure the workgroup has gotten into the details about the feedback that we received through public comment. But the thing that I would also say on this is that one way to look at it might also be to broaden the population by removing the age limit in hospitals, and that might get you some additional information and then deal with the specialist piece separately, and I know we're having a hearing on that Friday.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
This is clearly one we've even tagged for ourselves that we need more work on this. The reason we keep at it is because if you want to be patient-centered this has just got to be one of the things we take into account when we work with individuals. Larry and then Neil?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
Thanks. I guess I'll pick up the thread of the LOINC discussion and look to generalize that a little bit, that the whole movement towards standards is one that's going to take a lot of time and a lot of very clear road map. So whether that's saying LOINC is our standard for labs, which I don't think there's much controversy about, and we really want you to get there and we're going to look for ways to actually build a transition, because historically systems have been implemented using local codes and moving off of those is a very big deal. It's in fact in many ways probably tougher than the initial implementation was because you've got things up and running and now you're switching to a new coding system and everything is built around all the old IDs and all the old codes.

So it's a big deal to convert and to start maintaining mappings now, when I report externally I have to map to LOINC and I have to keep a mapping that's current and accurate, and any time I make an external change I have to verify that. It also has its own problems. So it feels like this is a core problem that needs a lot of thought and some approaches may be proposed for how we move ahead in an effective way, because I see this as one of those the more we get people up and running if they don't initially implement with standards we're just making the problem worse. The signaling here has to be crystal clear. If you're building new, there's no historic you're okay, put in LOINC for your lab, where you've got existing lab how do we build a bridge and looking to get input on how to do that well.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
That certainly was our intent, both on the EP side and, as I said, and forcing the hospitals when they are the lab vendor, lab provider, to do the same. We recognize the conversion problem, but for the reasons you stated, which is gosh, we certainly don't want even more people to have to convert in the future, so we're trying to almost insist on that at this point. It also builds to what Farzad said in the context, this for care coordination for clinical support, this is all that's going to be necessary and so in the strongest tools that we have we're trying to insist on them for all tests for which there are LOINC codes, so it's good to have this feedback. Neil?

Neil Calman – Institute for Family Health – President & Cofounder
Just to highlight what you said, Paul, I think it is important that even though one of the discussions that takes place often in our workgroup is saying who's ready, but I think it's also important, just like you said, Larry, that at some point you have to say we're setting a milestone. It's not one that has to be met today, there is an interval period, and what we need to call out, and I think in the market will take place, providers are going to go to their local labs and say, look, we have a requirement to do this and people are going to have to transition.

The second point I wanted to make was about just this whole area of advanced directives. I think we have a problem here, which is the delineation of specialties and different kinds of requirements for different specialties. I think it's a difficult problem because we know that people don't always practice exclusively within their specialty area. So you can have cardiologists that are doing general internal medicine and cardiology and run down the whole list. But I think that if we let that restrict us from putting kinds of requirements in place that say, well, we can't put anything in place unless it can carry across the entire spectrum of providers, so we can't do advanced directives because podiatrists don't ask that question, then I think we're going to end up restricting things that are really important. So what we did call out was the need to have that conversation. I think the specialty hearing on Friday will be helpful, but we need to have the conversation about a method for being able to delineate people, I guess most broadly who do primary care type care, and people who do specialty care. But then even within that there are people who on the specialty side who we would want to be asking questions about smoking and advanced directives and other things.

So I think one reason to do menus is to pick things that are relevant to your practice. I made the point in the committee, but I'll make it again here, that I think it's really important that we're not forcing people to do things that are not within their normal scope of practice unless it's a move that we want to make because we think it's important. So if we want everybody doing blood pressures because we want to identify people with hypertension, that's great. But if we put something in place and it causes people to

be doing things that are not at all within their scope and they don't normally see within their practice, it's going to create a lot of negative kick back to us and it's going to keep us from doing the things that we think are really critically important. So at some point we're going to need to grapple with this issue of defining specialty areas because I think as we dig deeper into this we're going to come up with more and more things that are particular and relevant to people in particular specialties.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Good. Marc?

Marc Probst – Intermountain Healthcare – CIO
Just a question on the scope of what an EHR is, and I guess I'm going to the lab, being able to send lab results out, that comes from a lab system. Is a lab system part of the scope of an EHR relative to meaningful use and how does that fit with things like certification?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Do you want to answer that?

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
We had a conversation about this during the Meaningful Use Workgroup and I provided clarification that I think was helpful to ... the Meaningful Use Workgroup. A good example for this and precedent for this is on the public health reporting side, where there is a meaningful use requirement around reporting of notifiable lab conditions to public health there is a certification, that functionality, the ability to generate that message in a conformant way, is included as part of certification and as part of the NIST testing. We have remained agnostic as to the technology used to generate that message, so it could be from a laboratory information system, it could be from an interface engine, it could be from an HIE, how that message is routed is up to the provider. Whatever system they use to do that would need to be certified as a module or as part of a complete EHR for performing just that action. We are not certifying laboratory information systems for everything that a laboratory information system needs to do. All we're doing, all we're attesting to is whether a conformant message can be produced from the black box that is that module or that complete EHR.

I think the precedent here would similarly be we are not moving into a certification regime for all laboratory information systems. What we're saying is however the results, again, very much parallel to the public health reporting, which included the message and the LOINC requirement, it would be a similar requirement for if you are sending lab results back to outside providers, outside of the hospital, that the test for certification would be are you producing your conformant message with LOINC codes.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
To positively reinforce Marc's point on this one, I think with regard to practitioners and healthcare organizations reporting public health issues on patients they care for, it's more of a natural fit on the EHR. But my own observation is that many of these hospital laboratories actually run a separate reference lab line of business and they actually do laboratory testing on many patients they never actually see. So I think it's subtle in this conversation, but it will be painfully obvious when we get the feet on the ground that these laboratories really do operate independently. And this is I think definitely going to be perceived as an indirect lever, we're going to withhold your EHR money for something that we'd like you to do in this other line of business, when in fact many of the patients they run lab tests for are never part of the set of patients they care for. I think this one, that it may be worthwhile to go further down Marc's concern on this particular issue. Paul Egerman?

Paul Egerman – Software Entrepreneur
I think these are very reasonable and interesting concerns. I agree with what Farzad said, to me the lab is just a separate department but it's a module from a certification standpoint. And while some systems have separate laboratory information systems, other systems have it completely integrated with the rest of what the hospital system already does. This requirement that hospitals be able to transmit the labs electronically is really very important because a very high percentage of group practices get their laboratory results from hospitals. This would be a major step forward in what our ability to have

information exchange would be to make this happen. So your comment, Carl, is a good one. I think you said it's like a back door way to be using meaningful use. It sort of is because we don't really have any policy lever over the independent commercial labs, but we do have a policy lever over the hospitals, and so we're using them to the benefit of the physicians, and it also doesn't strike me as that hard to do. It's an easy thing for me to say, but the laboratory systems do this, the independent ones ... they already have usually a way to communicate with the rest of the hospital system.

Marc Probst – Intermountain Healthcare – CIO
I don't disagree that it's a reasonable thing and I don't think them particularly hard technically to do, but I think the right and the best place to do it is within the lab system that is reporting those results. So the notion to certify it into an EHR is again sort of an indirect certification. Most EHRs actually don't have an onboard built in lab system, although some do, I can think of three or four, and I know we do as well, but most don't. So if they have to add the capability to be a reference lab for the purpose of their EHR certification that would be problematic. It will need to be some sort of separate module or certification and I think we do get into the territory of certifying lab systems and that really is the place to certify.

Paul Egerman – Software Entrepreneur
I guess I'm not worried about that because we do have modular certification at ... lab, independent laboratory software vendors are already achieving certification on their own, because that's what they need to do to .... I think it's possible to do.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Christine?

Christine Bechtel – National Partnership for Women & Families – VP
Just a question and then a likely comment; is this any change over stage one other than "use LOINC where available?"

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
It is not except for its moved into core.

Christine Bechtel – National Partnership for Women & Families – VP
Right, okay. So I think it would be helpful to understand how this is already playing out today and what the impact is, since there isn't a change here. Personally, I understand, Carl, your point. I tend to agree, though, with Paul and would reflect something that Neil said earlier, that it's time for us to drive some progress in this area of this long-standing forever problem. So to the extent that meaningful use can be a lever with this particular certification, as Farzad said, of the specific capacity, I think that's actually a very good thing. But know that we need to be mindful of how this plays out in stage one, since there isn't any change here. So to the extent that our hearing potentially on Friday has some dimensions of what's going on in the field, I think exploring this is good, because we don't want people to fail. But we absolutely do want to drive some progress in the lab area. I know Micky's group has done a lot of work on this and we should use it as a lever, in my opinion, but responsibly.

M
Larry?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
Talking about things that have already been tried, the California Healthcare Foundation has been supporting initiatives to do what we're talking about, and it probably would be helpful to look at their experience as we move into this and specifically look to learn from what they've done of where are the barriers. Because historically it's been a lot of tech magic to make it work, to be able to bring in structured lab results and have them be useful on the receiving side and dealing with the many to many-ness of the problem becomes a big problem. So where we have people who have been trying this for several years I think we should learn and then report back on what that experience has been.

M

This was from the person who said we need to push the industry.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
For the important things. Marc? Okay, so Christine just egged me on. She ....

Christine Bechtel – National Partnership for Women & Families – VP
....

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes. ...?

M
I really agree. This is a very important issue, and, Farzad, I really think what you said was important and we need to be able to move these transactions. The question I want to come back to at some point, and we won't answer right now, but what's the scope? We're going to find more and more things we can use levers for to get what we think is appropriate for healthcare, but is it continuing to be in the scope of what an EHR is and can we define that scope, because I think it will continue to grow. There are so many things ancillary to what I might consider an EHR but that maybe Paul's thinking should be included in the EHR, and that becomes part of the challenge here, not what we're trying to accomplish. What we're trying to accomplish is right on.

Farzad Mostashari – ONC – National Coordinator for Health Information Technology
I think that's a really important point and as we've seen, a lot of the innovation and a lot of where the industry is going is around things that now use the information that's generated, whether it's business analytics or predictive modeling and so forth. Some could argue the scope should be widened and meaningful use should include those others, but then we get into a distinct scope .... On this issue, and I think this came from a recommendation from the IE Workgroup specifically and perhaps someone could talk more about that, the health IT incentive program had three key things that the legislation itself talked about being within the scope and required in the program, and information exchange was one of them. So I think as we are thinking about collect the data, share the data as being part of an important part of our policy scope for the health IT incentive program, that I think is partly why we ask the IE Workgroup specifically to think about ways in which the incentive program could increase the data liquidity. So it's a good caution mark and we do have to be careful about it. We also have to look for ways in which guidance, where things are in scope versus not.

M
Information exchange, that's an infinite, right, scope, it's information exchange within a group of functions that are found in electronic health records.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think we can move on. Thank you for that feedback. We'll spend more time on that—

M
Paul, can I make a comment?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay, the final screen for this category, one remains unchanged except for moving to core, which is to be able to generate patient lists based on specific conditions. Clearly that's going to be in everybody's best interest and a need in dealing with things like ACO or patients that are ..., just it's the future. You've got to be able to understand your population, the needs of your population.

The next one, and I think it's a typo, that should be a menu item, which is the appropriate reminder for preventive or follow up care to more than 20% and it listed an age group 65 and older or less than 5. What we did is switched that to make it easier in terms of who's in the denominator is to switch it to all of your active patients, we do have to define active, and accordingly then reduce the threshold amount from 20% to 10%. So 10% of your active patients receive some kind of clinical reminder. Appointment

reminders do not count about added either preventive services or follow up care. It's basically to start doing much more of the outreach in a very patient specific way.

Three new things; one is, we had talked about before progress notes and so here it is progress notes both for the inpatient and outpatient side, the threshold set was 30%. Progress notes are defined pretty broadly. We did get support from this from the public. One of the things we threw out and asked a question about is scanned notes and really got very strong pushback saying no, we would not want to allow scanned notes per se other than those that can be optically read, because you want to be able to search against it. So progress notes but does not include non-searchable scanned notes, and we're taking a pretty broad definition of progress notes.

The next has to deal with medication safety, which as you know, is a high priority. We had very strong support from the hospital groups about the use of electronic MAR, medication administration record, and so our threshold was, again, trying to get away from percentages to say it is in use. So it is in use in at least one unit in the hospital.

Finally, we did get feedback from NIH asking for structured family history. While we agree we also recognize that there aren't any standards now so we're trying to signal and ask the Standards Committee to help us move towards a standard for family history because that's clearly an important part of a patient's risk profile. Let's open up the screen for comments and questions. Neil?

David Lansky – Pacific Business Group on Health – President & CEO
Paul, just quickly, I think when you talk about appointment reminders don't count, I think we meant reminders for existing appointments. But surely sending out an outreach to somebody to make an appointment would count, so I think we should just clarify that.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Christine?

Christine Bechtel – National Partnership for Women & Families – VP
I'm not sure if I misunderstood you or not. I think on reminders it was menu in stage one, and I think we agreed this moves to core.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct.

Christine Bechtel – National Partnership for Women & Families – VP
Okay.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
... the chart it's just not marked menu, but it should be menu. Carl?

Carl Dvorak – Epic Systems – EVP
I have two questions. One is, I know some places now have deployed scribes in certain situations. Does the 30% include scribes who are documenting on behalf of a clinician in real time?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I don't know any different from our group. It's just that the note gets in there. How it gets in there wasn't a concern.

Carl Dvorak – Epic Systems – EVP
So a scribe we think would be okay. Then secondarily, because it looks like it will be a stage two requirement I'm particularly concerned about the word "automatically tracked" used in conjunction with electronic medication administration record. Can we simplify that to "use of electronic medication administration record for medications prescribed within the hospital?" What I'm particularly concerned with is somebody in the regulatory writing process late in the game trying to define what automatically

tracked is and then move that into certification. That could cause significant ... changes late in the game and then either decide to use an electronic MAR, or do you—?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Actually, we wanted to go beyond electronic MAR. Originally, some of the verbiage included bar code administration. What we did was try to get away from prescribing the technology, let's say you wanted to go to ..., and that's how the phrase "automatically tracked" came about, and I see what your point is in terms of automatically tracked. Marc?

Marc Probst – Intermountain Healthcare – CIO
Okay, this is going to be incredibly nit-picky but I'm not sure how to track if they've received a reminder. I can track whether they were sent a reminder.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Which one now, the patient reminders?

Marc Probst – Intermountain Healthcare – CIO
Yes, receiving a patient reminder, if that wording can be changed a little bit.

W
Sending.

Marc Probst – Intermountain Healthcare – CIO
Sending, yes. I know, it's nit-picky. I was on a roll.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Neil?

Neil Calman – Institute for Family Health – President & Cofounder
On the issue of scribing, I think this is a slippery slope because one of the things that we did talk about was on the physician order entry side wanting the person that can respond to the decision support to come up to be the one in front of the computer. So I'm trying to understand how this would work if you have somebody scribing the progress note but then you're saying let's order this and that. I'm just not clear how the workflow works in those circumstances, that then the person putting the orders in would switch and it would become the provider, and I just don't know how that works. So maybe somebody can explain that. But I'd be concerned if we are now saying that the provider that can act on the orders and make decisions about them is not the one actually in front of the computer.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
So let me at least try to address that, but I think we'll need to take the conversation off line. What I understood Carl's point to be is describing the progress notes, but we, as you mentioned, Neil, in the past it does not mean that we would allow somebody else to enter in orders on behalf of .... We had specified a licensed person doing that because that person has a license responsibility to respond to it. I think, did Paul Egerman have one?

Paul Egerman – Software Entrepreneur
Actually, I just had a general question. The category includes the phrase "reducing disparities," and I'm curious to know in stage two what more have we done to reduce healthcare disparities?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think we're relying on a combination of quality reports and things that I would imagine would be more in stage three. So we're setting up and people have recognized that by entering in this information in coded format, and in more granular format we're setting up the ability to report. The way we would "require it" is through quality measures, and as you know that's not yet set yet, but they could have certain quality measures that you report on that involve issues in the health disparities.

Paul Egerman – Software Entrepreneur
Thank you. The big opportunity would be more granular data so the reference to the IOM categories for race, ethnicity, language, that would provide a lot more granular data for providers to address health disparities.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
So we're going to try to keep it short because we want to make sure that we hit the rest of the categories, so, Larry, Josh, and Marc.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
I'll be short. During the hearings on usability one of the things that was brought forward was that people are developing much more team-based care. So you might have multiple providers interacting, so the notion of a scribe is less someone who just is writing down what's being said and maybe more somebody who's creating the bridge between the primary person interacting with the patient and the computer system. So they might be bringing up data as it's happening, they might be entering orders as they're happening and bringing forward the alerts to say, it looks like there might be an interaction here. So the notion was it was a much more interactive kind of team care and not a behind the screen, someone who's madly typing while the doc is doing their thing, or transcribing from dictation. So it's an evolving model that certainly has lots of implications for how systems work of multiple people logged in at the same time in the same session and it blows up the whole model we have of how people interact.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
All we care is that some notes get ... so people know what's going on. Josh and then Marc, and then we'll move on.

Josh Sharfstein – Maryland Department of Health and Mental Hygiene – Secretary
First, let me say how impressed I am with the ... and the participation in this discussion. This is a little bit of the sensation of being thrown into a raft halfway down the river that's bumping up and I'm catching some and missing other things. I apologize. My comments aren't exactly timed at the right spot. I would point out that I think the discussion about not being able to stratify by race and ethnicity is extremely important from a public health perspective. In Maryland, we're setting up a subcommittee of our healthcare costs and quality council where we're going to be looking at how we can assess health disparities in the healthcare system. Our lieutenant governor's particularly interested in thinking about whether there should be financial incentives for providers that do a particularly good job, and you can't do any of that without the data that under locks it. So I think that's extremely important.

To the earlier discussion, I understand the mission creed concept, I would just say that from a public health perspective getting the lab information electronically around reportable diseases is extremely important. I could show you offices with piles of paper and very forlorn public health people going through them on reports of diseases. And you realize how far behind our ability is to deal with outbreaks and other important public health issues. It would be a seriously positive step to be able to automate that and get information around very quickly to the people who could go out and intervene and protect all of us.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
So you'll love some categories coming up. Marc?

Marc Probst – Intermountain Healthcare – CIO
Just a quick contextual note, on the electronic notes that are coming out, it seems to me that—and many of us are doing notes already. So it's not a big deal we have to go through change, but with ICD-10 I think it's going to change significantly. Particularly in the eligible provider space, how notes are actually taken in regards to getting to the ICD-10 codes and just in the timing, what we're asking people to do and how that aligns timing wise looking towards stage two. You may have already had that conversation, but I thought I'd add it.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay, let me quickly change—

M
Paul, can I make a comment?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
... George to start discussion of category two. And thanks for this rich discussion. It adds immensely.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Thank you, Paul, and good morning. The next category is engaging patients and families. Let me point out that there are many ways to categorize how we went from stage one to stage two. Because it was complex to begin with I think we've simplified it, was one of our goals. One goal would be to minimize provoking comments. A different goal would be to make it as simple as possible so people understand it, so we went for that second one. So let me explain what I'm saying. The first objective up there is to provide an electronic copy of the chart, and that was the entire legal record. This one we dropped because it's covered, for the most part, by the following objective and also to some degree followed by HIPAA. Remember, this is the one where, although you didn't have to do the paper chart it was the concept of a legal record being handed over which is covered by other laws and as you'll see in a second we've kind of covered the important clinical parts in two other objectives.

Next, the second objective is about—and then what I want to say is so you have eligible hospitals, eligible professionals, each of them has an immediate thing they have to do that's immediately involved in the patient's care and a longitudinal thing, and that's how we end up with the next four objectives. So the next one is eligible hospitals supplying electronic discharge instructions at the time of discharge to the patient. We change the way that we do measurement to greater than 25 instances, and the reason for this, we came up with this measure of counting under two criteria. If it's hard to get at the numerator and denominator and if we believe also that once you do 25 of them you're likely to do as many as are clinically useful, so it's a way of getting people on board but not torturing them with the way they need to measure it in a feasible way. This one is hard to come up with a numerator and denominator because you have to count how many times that a patient accepts electronic discharge instructions, and that was the challenge on this one and that's why we used the 25 ... here as opposed to the later ones. So basically it's saying that greater than or equal to 25 patients receive electronic discharge instructions at the time of discharge. This is the immediately useful information.

The next measure, which we're calling new but you could call a broadening of the fourth one, but we're calling it new here, hospitals, 10% of families view and download relevant information about a hospital admission and that information is available for all patients within 36 hours of the encounter. Then quickly go to the fourth one for eligible professionals, 10% of patients and families view and download their longitudinal health information. That information is available to patients within 24 hours of an encounter. The 24 hours is how long you have to get the information that's in the electronic health record. It's not talking about if the lab result comes in do you have the four day time to review the record. We're not shortening that interval. Those two led two objectives, number three and four are the two longitudinal views of the patient's record. Then the fourth one is the immediate one for the professionals, EP, patients are provided with a clinical summary after 50% of the visits are within 24 hours, although it gives the exception that pending information such as lab results should be available within four days of becoming available to the EP. That again gives that exception that I gave. So that's pretty much a continuation of stage one.

Next, eligible professionals in hospitals, 10% of patients receive electronic health record enabled patient specific educational resources. This is going to go from menu to core and instead of raising the threshold what we did is we took out "inappropriate" which was hard to measure anyway. So we tried to make it easier to quantify it by taking out something that it wasn't clear how anyone was going to tell whether it was appropriate or not, and instead of raising the threshold we left the threshold at a low rate of 10%.

Then we have three new ones for eligible professionals, patients are offered secure messaging online and greater than or equal to I think with the intention, greater than or equal to 25 patients have sent secure messages online. Again, here we don't know how many want to use it, so we picked a number

that's large enough that they have it programmed into their system but so that there's not so much concern about well, how many people would actually want to accept this.

The next one, eligible professionals, patient preferences for the communications media is recorded for 20% of patients, that's the original one unchanged from what we had specified in December. Then for stage three signaling providing a mechanism for patient entered data we need to supply that list but we have until stage three to do that. We should start working on that now and consider information reconciliation for stage three to correct errors, not just the patient entered errors but the provider entered errors, having ways for the patient to say that something went wrong. Again, those are both signaling for stage three.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
David Lansky's on the phone and would like to make a comment. David?

David Lansky – Pacific Business Group on Health – President & CEO
Thanks, Paul. I don't know if you want to—this is on the ... on the quality, safety, efficiency battery. Do you want to wait and do that after you've ... George's comment?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
That's probably a good idea and I should have invited you to make comments before. So instead of disturbing the momentum right here, let's do that right before we make the change.

David Lansky – Pacific Business Group on Health – President & CEO
Thanks.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Carl?

Carl Dvorak – Epic Systems – EVP
Thank you. A couple of questions. I'm assuming that the 25 must come with a 25 per year. It wouldn't be that you would just do 25 and then say we're done with this and discontinue the practice.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Our intent was per year.

Carl Dvorak – Epic Systems – EVP
Okay. Secondly, I see view and download as a requirement. It's probably not necessary that a patient download anything and in many cases just having access to it would be the most appropriate thing. Is the "and download" requirement accidental or is that intentional?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
View and download, we did not mean that every patient has to do both. Christine can actually answer that.

Christine Bechtel – National Partnership for Women & Families – VP
Yes, it probably should say "view and have the ability to download." But that capability absolutely has to be part of this function.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
You ....

Christine Bechtel – National Partnership for Women & Families – VP
Right, because Carl what we're trying to address is the fact that if you think about the number of eligible professionals and also eligible hospitals who give patients access to their information, I could have seven different portals with no ability for me to collect my information. So simply having that capacity, if I choose to download and then I can aggregate it where I'd like, is what we're trying to achieve. But the criteria

should say I can view and I actually do view, that's the measurement, which is the same as stage one, but I also have the ability to download if I want.

Carl Dvorak – Epic Systems – EVP
Yes, I agree with the ability to download. I just think in a world of functioning health information exchange the notion that one would download, I think historically that's been almost a proxy for all exchange personally since they can't do it on my behalf. I suspect that the real download use case will diminish greatly. Although some could have seven health systems I think the majority have one, maybe two that they transcend, so I think we'll probably see the viewing as the most important. The other question I had was related to 24 hours in the access, the first reference to 24 hours there, do you want to have that same caveat that you've got still four days?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
I think that was the intent, right, Christine?

Christine Bechtel – National Partnership for Women & Families – VP
Yes—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
On the pending labs—

Christine Bechtel – National Partnership for Women & Families – VP
... pending information, yes. It's the same as stage one would have, the four days.

Carl Dvorak – Epic Systems – EVP
Then again in the interest that the software can be ready for stage two, that supply list on patient entered data, I think that would be critical to understand what we anticipate requiring from a regulatory standpoint, either as early as possible or have it be as optional or flexible as possible. That one could be a real significant monkey wrench in the game ....

M
Okay, ...

Carl Dvorak – Epic Systems – EVP
Okay, you're right. Sorry.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Can I interject one thing on the view and download just so that you can comment, so in our workgroup we discuss the notion in stage one we allowed any electronic media, including USB drives and CD. That was to afford flexibility. It isn't the direction we want to go, so I think we're thinking of also removing that ability because it's not secure. There are lots of reasons why that's not a good thing, so we invite your comment on that too. But I think it's partly our intent that we're moving in the direction of not having that be acceptable options.

Christine Bechtel – National Partnership for Women & Families – VP
But, Paul, patients still would have the ability to choose paper if they want.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes.

Carl Dvorak – Epic Systems – EVP
I do think this one is particularly interesting from a social habits perspective. The people who have access to a download button, we'll have to go through extra precautions to help them understand what it means to leave your unencrypted personal health information on a laptop hard drive, that although you may trade in, give to relative, you may not realize that that data still exists. Even if you think you deleted the files they're still there. It doesn't anyone beyond the eighth grade these days to download the

programs to discover what was left on your hard drive, even though you thought they deleted them. So I do worry that that download, we may need to think through that more carefully because if we make that available to everybody I suspect we'll see a rash of people being surprised that their health information actually was left on a hard drive even though they didn't expect that that would happen.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Linda?

Linda Fischetti – VHA – Chief Health Informatics Officer
As you know, at the Department of Veterans Affairs we're very much supportive of patients viewing and downloaded, it was mentioned in the State of the Union speech by the president as a model of being innovative. But I want to ask about, we've just taken a measure and moved it out of our health system out of our EHR, and placed it on to a patient. Some of these are worded as the patient will receive, some of these it's an act that we're going to have to measure the behavior of the patient. So what we tend to do is that we will make sure that we are assessing appropriately and measure that, make sure that we as a healthcare system are intervening appropriately and measure that, and then measure the outcome of the success of that. We tend not to place the burden of action for our success measures on the veterans because that will of course change our behavior as an organization. So I just wanted to see if you had any conversations related to that.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Yes. Do you want to talk a little bit—?

Christine Bechtel – National Partnership for Women & Families – VP
Sure. We've had many, many revisions related to that, so I would say a couple of things. One is, that is actually the measurement for stage one of meaningful use. On the access criteria it is 10% of patients actually access their health information. We struggled I think with this because the alternatives were so not meaningful for patients and families in the current context of a healthcare system that does not routinely either really engage patients or give them access to their health information, so the other alternatives of offer to them or provided upon request don't play well. What we did here was continue the stage one measurement as a way to really get at a measure of true engagement. That is, if you're going to want 10% of your entire panel, which we did not think was unrealistic, to log on one time in the course of the measurement period. That you would really actually have to engage them in some way that is more than putting a poster in your waiting room as your offer mechanism, that that was our logic.

W
We also deliberately moved some of these thresholds to be pretty low, with the notion that you would make that effort to make sure that you could attest to a number, that 25 actually did it, as an example, or you hit the 10%. So acknowledging that there is some responsibility placed on the provider for what the patients actually do, but that seemed to make more sense to us than saying offer it to 80% of patients. Then figuring out how you measure an offer and how you attest under penalty of perjury that you have offered it to 80% of patients versus being able to demonstrate at a low level that in fact there's a threshold that's been hit that probably indicates a fair degree of effort on your part to get the patients to do it.

Christine Bechtel – National Partnership for Women & Families – VP
Our organization has done a number of interviews with practices of varying size and essentially what they told us is that, yes, this is a no-brainer. It is a good approach because it does require and is supported by the marketing efforts that are often provided by the vendor of that particular portal functionality, and it does in fact get you to real and meaningful engagement across patients and it wasn't unrealistic in their view.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay, let's have Gayle, then Larry, and then Marc.

Gayle Harrell – Florida – House of Representatives

I want to jump in this argument too, because I just have a real significant problem if we're moving that. I don't know if that's a menu option or a core option, if you move that to core and it becomes problematic in certain populations, especially in those that have digital divide issues, where you have a low threshold of people with the capability to view things electronically, you put a huge burden on a lot of our clinics. A lot of our ... qualified community health centers, and a lot of folks who have it difficult, who given their population and the digital divide that exists, may have some significant issues in not only educating their clientele, but also their clientele having the ability to access the information electronically. If it's menu, that's one option. You move that to core and it becomes, I think, very problematic.

Christine Bechtel – National Partnership for Women & Families – VP
We have ... comments and we did actually have an exclusion in the denominator for lack of Internet access, so I think that's a good flag that we can return to. That being said, I think you'd be surprised at the rising rates of Internet accessibility among lower income populations, but we did have an exclusion criteria that we could revisit to address that. But it is in the core, I should say.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Larry?

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
Just a quick note, picking up the discussion on download, maybe we want a different word, both because of the issues of downloading it to a local machine and having the problem of it living there. But I think the real goal here is not that I load it into my environment, but I actually put it into a personal health record that's managed and the data is something I could accumulate. So I don't know if the right word is "transferred" or "electronically transferred" or something to get out of this download notion, which is like, okay, I got it for myself and now I'm done.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
We did spend a long time figuring out—we did go through the vocabulary of words you can use to transfer data, so transfer, download, access, view. We thought that download was concrete enough that people would understand it, that the concept of looking at the data versus the concept of getting the data and download would be sufficiently concrete. Once you start pulling in PHRs then you're linking with something that may not exist ... so it may just require that the rule actually goes in to defining what view and/or, actually we changed it to "view and the capability to download" means may be the best way to address that concern and to make it clear that our goal is that sending it to a PHR is a reasonable destination.

Okay, so we have five people looking to comment, but if we go out of order sometimes when you come around again the issue is moot. So, Tony, do you have something you want to say on this one, or is this a new topic?

Tony Trenkle – CMS – Director of OESS
No, it would be on this one in general, just a couple of comments. One is, I do agree with Gayle. We work with Medicare and Medicaid populations, you have people with disabilities, you have people who don't have access to Internet, others have limited access, and we need to be thinking about that.

My second comment, Paul, gets back to the old notion of loading down the Christmas tree with too many balls. And thinking about what we really want to get out of these different areas, as opposed to keep adding on objectives, moving some of the ones from menu to core—just thinking about it in general, what do you really want to achieve as opposed to getting everything that you want into this. Then of course I've made this point before, is there are other levers besides meaningful use. When you think about it overall how are we going to empower the patient population, who are the different types of patients we're working with and their providers and families. Then what's the overall objective and how can it be accomplished both for meaningful use but also through other measures, particularly when we're dealing with the Medicare and Medicaid populations.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair

Okay. Marc?

Marc Probst – Intermountain Healthcare – CIO
A few quick comments, and I hope you're not feeling like a piñata, on the hospital 10% of patient information view and download, I think the term "relevant" either needs to change or be really well defined, what is relevant information. I'm assuming it's within 36 hours of the end of an encounter, so if you have someone in the ICU for 45 days, again, that's just an assumption.

On the next one, just again a context discussion on the eligible providers and probably the one in hospitals, as ACOs come together the whole concept will be creating a longitudinal record that's hopefully more meaningful and crosses the eligible providers in the hospitals. And again as you go through your discussions I don't have the answer, but I think from a timing perspective and what Farzad said at the beginning we need to keep in mind where healthcare's headed and that some of these requirements may be fulfilled or meet that. Then I guess the last quick one was clinical summary, and I know that was a stage one requirement, if it defined what clinical summary is, and if not can we get a little more definitive about it.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
We have at present a list of fields that are in the clinical summary that got mapped to the CCD and the CCR.

Marc Probst – Intermountain Healthcare – CIO
Okay, so that exists. Okay, thanks.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Josh?

Josh Sharfstein – Maryland Department of Health and Mental Hygiene – Secretary
I apologize if this is an ignorant question, but when you're talking about informing patients of discharge instructions, is text messaging considered an option? As it gets to the digital divide issues, I'm familiar in public health there's some pretty impressive data about how many people use text messaging.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
First of all, we don't want to specify how people get it. We don't want to be overbearing on that. These discharge instructions are usually a list of the bulk of instructions that cover everything you need to do. The text messaging tends to be specific reminders about what you need to do, which is actually a good thing to implement, usually because you're saying you haven't set up your appointment yet. So often those are more reminders than discharge instructions. They're reminders on the discharge instructions. If you set up text reminders, does that count as electronic discharge instructions? I don't know. I guess we could go back and think about that.

M
Outside of the security thing ....

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Well, if the patients elect it then I'm not sure I can halt it. Okay, so that's a good point. We have to clarify that. Carl?

Carl Dvorak – Epic Systems – EVP
Yes, I want to come back to this download issue for a moment. I think in general patients have a sense as to their rights under HIPAA. They may not be able to articulate all the nuances, but most people I talked to of all different educational backgrounds have had a clinic or someone talk to them about we keep your information private, they've had to fill out these forms, and I think they have a definite sense that that information is protected in a special way. As we make it available for download and subsequent upload if that information no longer carries that HIPAA protection that the patient is likely to assume is present, as they upload that into different Internet portals, which may likely proliferate. And in exchange

for an Internet trinket I give them access to my data and it turns out to get exploited in unexpected ways, I think we want to be very, very .... This may be an area where we should have a high standard of caution and maybe some standards around patient informed consent as that data moves out from HIPAA protection into the general Internet world of advertising and multiple use and secondary use of data.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
First of all, let me say on time we're going to run out of time for our objectives, so we have to really make sure that—on download there's a balance. You don't want to be overprotective of patients and say you can't get these data because we don't trust that you're able to handle it. That's not our prerogative. On the other hand, we don't want to do something that would put patients at risk that they don't expect. Christine, do you have a quick—

Christine Bechtel – National Partnership for Women & Families – VP
Neil.

Neil Calman – Institute for Family Health – President & Cofounder
To finish the sentence, we could require a warning at the time of download or something like that and basically put that in our criteria, that these people be warned about the risk of downloading their health information. I think that's a perfectly reasonable thing. I would not have thought of that, but I think that's a perfectly reasonable—

M
I think there's an opportunity also ... the FTC or whoever will regulate PHRs, I understand that's done separately, but this information might be marked as HIPAA information and there might be a set of standards that whoever gets that information would have to go through before it becomes available for any ....

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Once it's gone to the patient it's up to the patient to—

M
When they upload it that person might be subject to HIPAA but ... they're not subject to it.

Neil Calman – Institute for Family Health – President & Cofounder
I've always liked Paul's going in perspective that we should always try to do things that fit within what the patient might expect. And I think what we have to be careful of, as we saw with the phones yesterday in the hearings on the Hill about location tracking, is that patients simply will not know to expect that and I think the healthcare system actually sets them up to assume the opposite. It sets them up to assume it's protected as we give them this file that will land in unprotected space. But they will likely not realize how unprotected that really is.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Educating the public about what we're doing is one of our key goals, so I agree with that.

Christine Bechtel – National Partnership for Women & Families – VP
Deven, did you have something to—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay, so next we're going to move—

Christine Bechtel – National Partnership for Women & Families – VP
George—

Deven McGraw – Center for Democracy & Technology – Director
I think—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Oh, I'm sorry.

Deven McGraw – Center for Democracy & Technology – Director
... the space to talk about issues related to download is with respect to tiger team deliberations on how this gets managed appropriately, including the transparency aspect.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
That's a very good point, Deven.

Christine Bechtel – National Partnership for Women & Families – VP
My brief comment is coming back to Marc and Tony about the ACO stuff, and it applies I think universally to all the categories that we will consider. I spent some time since our last meeting really looking at the ACO regulations and there are lots of issues with it, which I can talk about later if it becomes more relevant. But I would say with respect to this issue most of what's in the ACO regs on patient engagement is very good, with the exception of the fact that it is all about having a plan to or documenting a process. There is no accountability for how good the plan is, what you do. So on beneficiary access to information specifically it turns out that you have to communicate your plan for giving beneficiaries access to their medical records, but that doesn't stipulate it's electronic or not. It's clear that overall the ACO regulation does rely on meaningful use as the program is designed today and does not pull all of those requirements into the program.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Thank you, Christine. In improving care coordination, we have these four objectives. The first objective to test health information exchange is being eliminated in favor of using health information exchange using the use cases that are in the objectives below that. The next objective is medication reconciliation conducted at 50% of transitions by the receiving provider, and that's being moved to core. I'm sorry that it says 80. We discovered that typo after this went to press, so the red overrides the black. That's a movement to core of an objective without increasing the thresholds at this point in time.

Next, summary of care record, the eligible hospital 10% of all discharges have a summary of care record sent electronically to an EP, a long-term care facility. Eligible professional, at least 25 transactions sent electronically, and then if we have an exclusion, if there's no electronic recipient, analogous to what we said earlier in the previous objective, if that's the case then you must send them on paper. Then we pointed out that we need to talk about the health information exchange preamble, the whole point of that preamble was to point out that the test one was eliminated and the purpose of this is to actually implement health information exchange. A new objective lists care team members available for 10% of patients via electronic exchange, including the PCP, primary care provider, if available. Unstructured list is allowed for stage two simply because we don't have the standards yet for it, but we're signaling that we want to have a standardized list by stage three.

Finally, the longitudinal care plan, which needs more work, again we were working on this stuff in the last 48 hours, the longitudinal care plan is being merged with a summary of care to create a summary and care plan, is our most recent proposal. So this is the summary of care record that is mentioned above, adding the relevant fields from what we proposed as the longitudinal care plan, which is the plan in the patient engagement fields. Yet to be defined is exactly is this merely a push technology, where it goes pushed along with the transitions, or is there any concept of pull, and that's something we still need to work on. But the concept that we're presenting here is that these two things would be merged.

David, did you want to talk anymore about this issue, because you led that discussion.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
....

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay, Larry first.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
First, yes, coordination of care is absolutely key, so this is great to move it out of testing and into actual exchange. In the second of the actual ones, summary of care record moving along with the care, historically LTC has meant nursing homes, and I think the intention here is much broader than that. So perhaps the wording here to either look at long term and post-acute care, because of the roughly third of Medicare patients who are discharged to some other care setting half of that third go to home and are getting home health. The vast majority of those going to nursing centers are there for a short stay, many of them under a week or two. So these are very transitional.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay, good. So we need to broaden that.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
The other piece is there's been a lot of discussion over the last few weeks about longitudinal care plans, but they're actually pretty new beasts. So I'm really concerned that we put them into stage two when we're still trying to figure out what the blank they are, even though I think they're absolutely critical, and also to point out that much of care is many to many. You don't go from one provider to another and then you're done and it's a ping-pong back and forth. Many people have multiple providers, and that plan being integrated is a new way to deliver care and new system capabilities to support it.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
You just said it exactly right, so we don't have a formal definition of a structured longitudinal care plan at this point in time. This is one of the most important things we're doing and it's certainly one of the ones that's well aligned with ACOs, so we didn't want to drop this completely. So we thought that by merging it with the summary of care record, which contains most of the information that you would want in your care plan. And adding those fields, which we have to define but might be partially free text at this point in time in stage two was a way to continue to do it at this point in time—

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
So I guess my concern would be that we actually improve the signal to noise ratio when we do that.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay.

Christine Bechtel – National Partnership for Women & Families – VP
George, just on this topic can I say that I think it would be helpful to come next month with more clarity around the data fields, because what we've talked about is that there's actually a significant amount of this information that's already being collected in stage one, or we're asking for in other parts of stage two. So I think we're getting nervous about the name, longitudinal care plan, but in reality what we're asking for in stage two is I think very achievable because it really leverages the other work that we've already done in meaningful use as well as some work that NQF has already done.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay. I have Carl, then Gayle, and then Paul. Carl?

Carl Dvorak – Epic Systems – EVP
As a computer science person I always fancy myself being able to put a decent scope to something, is it bigger than a bread box, a garage, etc., and as we've tackled the programming challenges behind the shared longitudinal care plan across organizations, I was at least two orders of magnitude underestimating the true complexity. So for this care plan in specific I would recommend remove the word "merge." It's easy to merge it once. It's hard to keep it up to date if you've got four or five participants managing a care plan. I would, instead of the way it's worded here I would suggest that a fair and reasonable requirement might be that each care team member has a care plan for their domain of care and that those care plan ... be made available to other care team members to view. I would use extraordinary caution here because the notion that you could merge these implies that you'll maintain

them through time and I think you open up an incredibly complex can of worms here, and for stage two I don't think this is at all even—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
That's exactly the issue we discussed, although that word "merge" means something else. That word merge is just referring to merging the care plan and the summary together, so it's merging objectives. However, a longitudinal care plan—oh, actually it shouldn't say longitudinal anymore, sorry. So the word "longitudinal" is supposed to disappear because the care plan is supposed to be what you're doing, not a history of what you've done in the past. So that's just a typo there.

Then the question, that's why when I said do you push, that's exactly what I was referring to, that discussion. So we have to define that further and what you're saying is it's difficult, so we can't expect to have a magical single care plan across all providers in stage two without thinking about how that would be implemented.

Carl Dvorak – Epic Systems – EVP
Right. And is there a definition of "care team" out there? There may be one and I'm not familiar with it. Did we define that?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
We define it as at least one person, so we're leaving it nebulous at this point in time. We're asking people to include the PCP if available, and that's where we're stopping at this point in time, because you can say is this specialist relevant, is this specialist still relevant, and so that's why we said one or more.

Carl Dvorak – Epic Systems – EVP
In general I would strongly suggest we move the care plan out of stage two. I think this is important and needs to be done well and I'm just not certain that there's the thought behind this yet which would allow people to do this while in stage two. I'd make a strong recommendation that we consider moving it out to stage three.

M
The intent really was to have a place to put it, but not to be very specific beyond that. In most records today there is no place to put it, so that's really as far as we were trying to go.

M
A place to put it could be in the summary, you could just ... plan and somebody could say follow over the next year and bring back as necessary. Would that be a ... plan?

M
... too prescriptive about exactly where to put it, because it might sit in different places in different records.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Gayle?

Gayle Harrell – Florida – House of Representatives
Thank you. I think certainly care coordination is one of the most important things we're doing, and that is where we're going to get the biggest bang for our buck at the end of the day in what we want to accomplish. So facilitating this to me is high, high priority. What I want to talk about, though, is the long-term care facilities and moving electronically that summary of care record to long term care. Under the legislation, that is not really in our purview and we get the ... program possibilities in the incentive program not extending out to long term care. Is there a way to specifically address that and making sure that, I'm fully on board with it, but we don't have meaningful use objectives for long term care, we're not incentivizing our long term care providers to purchase electronic records. So someone in gerontology sub-specialty may have some difficulty making sure that all happens when you don't have eligible providers ... in long-term care. Can you address that whole issue on how do you address long term care?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
What we wanted to do is make it expanded for hospitals. Instead of just saying we're going to count how many got sent to eligible professionals, if you do send it to a long term care facility you get to count—

Gayle Harrell – Florida – House of Representatives
You get credit.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
... this in your favor.

Gayle Harrell – Florida – House of Representatives
Okay.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
But it's not in the denominator, because the denominator is—

Gayle Harrell – Florida – House of Representatives
Okay, it's not in the denominator.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
... discharges. So this will only help you but it won't hurt you.

Gayle Harrell – Florida – House of Representatives
Correct. That was a major, major concern. Also, I want to, when we're looking at HIEs and how you're defining transitioning that record, and as we're setting up our HIEs are you defining that movement of the electronic health record to an eligible provider, is that outside your vertical organization, so that you have to go through an HIE to get it there? Or what is going to be your definition of that and how are you going to address the situation where you don't have that capability in areas set up yet, because I don't know that by the time we get to stage two we're going to have that comprehensive HIE system out there yet.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Actually, our intent wasn't to encourage exactly that, and now that you mention it, if you only count your internal hospital doctor you can easily get to 10% without doing anything.

Gayle Harrell – Florida – House of Representatives
Correct, but is that what you're counting? What are you counting?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
How did we do this, David?

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
I think we elected to allow you to count anything to deal with exactly the issue that you're talking about. We didn't specify that they had to be people outside your organization.

W
I think ultimately since the goal is really care coordination for the patient, if that means better exchange of information within your facility then that's what it means, because in fact that's actually not happening very well in some places today. In terms of your ability to exchange with people externally and needing to make sure that there is an ability to do that, we do intend on allowing exclusions for folks who physically cannot electronically exchange and then they would have to do so on paper. That would mean not just that you don't have an HIE in your state, but also you can't use the protocols of the NHIN Direct program, which don't require you to exchange with an HIE. It's our hope that there's going to be much more capability to exchange out there than exists today by stage two and we really wanted to push this, but allow for exclusions where there is physical impossibility with respect to things being able to be done electronically.

Gayle Harrell – Florida – House of Representatives
I couldn't agree with you more in pushing it, but I don't want to hold providers to a standard that's unachievable, and certainly the exclusion is important and the definition of who you're exchanging with, whether it's inside your vertical system or whether it's outside makes a key difference. I think you need to be very specific in how you word that.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay. I'll .... David Lansky, do you have any questions? I'm going to go to Paul next, but David Lansky if you have any questions – actually, why don't we have Paul ask his questions and speak up, David, after that.

David Lansky – Pacific Business Group on Health – President & CEO
Okay, thanks.

Paul Egerman – Software Entrepreneur
My question is the issue, it says list of care team members available for 10% to 20% of patients.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Ten percent, just so you know, the red overrides the blue. That was one of the—

Paul Egerman – Software Entrepreneur
Then it says "via electronic exchange." Why does it say "via electronic exchange?"

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
The 10%—

Paul Egerman – Software Entrepreneur
Actually—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
... list of care team members, including PCP if available.

Paul Egerman – Software Entrepreneur
Okay.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
So that's the objective.

Paul Egerman – Software Entrepreneur
What are we trying to accomplish with that objective?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
The beginnings of coordinating care. If you don't know who's providing care then you can't coordinate with them at all.

Paul Egerman – Software Entrepreneur
So for 10% of the patients they will get a list of the providers they've already seen, or is it providers—

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Many electronic records could have no field for you to put in who's the patient and who's the patient's doctor. In some records, there's no place to even enter it. So if a doctor wants to record, okay, the patient comes in and says I've seen this, this and this doctor, there's no place to even put the information. Let's at least start that process and start people recording the information, although admittedly in stage two we're being flexible about it.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine

Clinically this ends up just being very, very useful.

Paul Egerman – Software Entrepreneur
But the objective is written that it's given to the patient.

David Bates – Brigham and Women's Hospital – Chief, Div. Internal Medicine
The intent is not that it be given to the patient.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
No, 10% of patients have a list of care team members.

Paul Egerman – Software Entrepreneur
Okay. I misunderstood it. So if—

M
... not given to the patient.

Paul Egerman – Software Entrepreneur
I misunderstood it. Sorry.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
David, did you have a question?

David Lansky – Pacific Business Group on Health – President & CEO
Can you hear me okay?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Now we can.

David Lansky – Pacific Business Group on Health – President & CEO
Okay. Actually, this goes back to ..., but I think this last conversation is germane as well. I'm concerned that we have to simultaneously look forward to stage three and look sideways to the quality measures and certification arms of the program as we look at all these criteria. I think we're all struggling to make sure we keep the forward progress up the escalator and I was particularly concerned looking at the quality, efficiency, safety bucket measures that we have got proposals now, for good reason, for example on the CPOE for imaging, of a very modest requirement that we simply demonstrated someone can move one instance. Similarly, there are ... decision support requirements could become more functional than operational. What I'm worried about is that you're going to have a desire on the quality measurement side and in the stage two requirements, to see fairly advanced performance against these kinds of capabilities. We may not be setting the bar high enough to stage two so that people can succeed at stage three or conversely, when we get to the stage three discussions we'll be again forced to water down the requirements because we feel that the field has not moved far enough during stage two.

So, for example, a number of these quality measures around efficiency, which is one of our primary buzz words in the first bucket, require imaging data to be available so that we can look at the efficient use of imaging studies. But if we're not setting a very high bar for capturing imaging data in the record, we're not going to be able to apply clinical decision support to it and we're not going to be able measure performance on efficiency and appropriateness of imaging. I think we've got a little bit of work to do this summer to harmonize across our multiple arms of the program with a view towards stage three so that we don't really find ourselves not able to support the overall Congressional intent. I think this certainly applies to the information exchange targets as well, where we've, I think, for good reason moved to this use case approach in care coordination. But then the actual availability of data to coordinate care may be very slim at 2015, and so I'm concerned about that. I want to put it on the record that we have some work to do to make sure that the escalator is vertical enough to get people where they need to get.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair

This may come up again as we go over timing, which we're going to do in a second, which talks about the bulk, how much work there is to do and in addition clearly the two workgroups need to work together over the next couple of weeks also. It's very fair, David, and as David Bates was mentioning, a lot of what you see here, the place for healthcare team members, the place for a care plan is really our hook into the certification process so it even exists where it doesn't today. That's how we ended up with some of these things where it's not fully described and certainly not standardized, but we want even people to have a place to put this data. Gayle, do you have a comment?

Gayle Harrell – Florida – House of Representatives
Just one quick question. I noticed that we are eliminating some things from meaningful use stage one and in preference for other things. How are you going to deal with that for people for existing stage one users? Are you going to not hold them accountable for what's going on currently in stage one, if you're eliminating that, or it just will be when they get to stage two they won't have to do it anymore, so then why are we still going to require them to do it in stage one?

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
I think some of these are stepping-stones anyway, so you would have had to test the exchange before you are measured on its use. I don't think we violated that rule, so in a sense it becomes moot, it's sort of on your way anyway to stage two.

Okay, population and public health, these are our objectives. Eligible hospital and professional submit immunization data, making sure it's running so it's not just testing, but attest to at least one being transferred in accordance with applicable law and practice. That's a switch because some of our feedback said that we had to rephrase our moving it to core for both. Then in stage three we want to signal cumulative immunization record and using recommendations that are generated by the Health Department and sent back to you. The next one on reportable lab results for hospitals, again, attest to submitting to at least one organization, so there may be many places you need to but just saying you're doing at least one of your, say, local health departments or state health department, again, in accordance with applicable law and practice move that to core. The third one, eligible hospital submits syndromic surveillance, we discussed this, and if we have menu items in stage two this might be a menu item, that is having the eligible professional submit syndromic surveillance data. But you can't have one menu item because if you have one then either you make them do zero or one, either it's core or it's out. So the team has to consider ... and we're not sure if they're ready to do that yet.

Then the next objective, which is new, is basically submit reportable conditions is how we started and then in talking about what standards were available for this, working with Art, apparently there's a standard, more advanced, for specifically cancer conditions, which is also important to public health right now. So for CMS to consider, again, this is another one that might be menu. Although having these two menu items doesn't help you that much because they're similar, so you've either got to do both or neither potentially in accordance with applicable law and practice and to the Standards Committee saying that the possible use of the IHE cancer reporting implementation guide.

Then finally signaling for stage three, patient generated data submitted to public health agencies, so most of it is just carrying on moving from test to actually implement in stage two, so not only moving it to core but saying a test is not enough. Now, if it can't be received, then that would be the exclusion of course. And the only new ones for stage two, as we've clearly marked CMS to consider, because we're a little concerned about whether that's feasible to move to core for eligible professionals at this point in time. Carl?

Carl Dvorak – Epic Systems – EVP
Thanks. As we watch this play out in the conversations across the country one thing that's becoming a growing concern is that the public health departments in the different areas don't have the same standards support and they don't have the same level of urgency to create single national standards. I think we're at a high risk here for these, if they're part of stage two, we have this proliferation of all the different methods that one might receive it. As a developer of EHRs you're juggling all 50 states and sometimes it's even down below the state, it might be a city, New York City or something, too many

different methods for how one might receive it and you have the requirement to send it, so that leaves us a gap. With stage two and all of the other things that are happening in stage two I would suggest that we re-examine these and look at defining a small set, or one hopefully, national standard that as long as you are ready to transmit in that one national standard, you meet the market. Whether or not your public health can receive a net national standard yet may be a gap, but I'm thinking it's fair to hold people accountable to be ready to transmit. That's a reasonable standard for us to set. But I'd like to do it in such a way that it didn't create an entropy and a lot of throwaway work as we cobble something together in 50+ dimensions only to have to come back once we do get standards and try to do it right.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Art, you had commented on standards yesterday, so do you want to—

Art Davidson – Public Health Informatics at Denver Public Health – Director
Carl, I think you're right, that there is a fair amount of variability in how states are willing to receive. But there are standards available currently, there's an HL7 2.51 from the CDC for immunizations, there are standards for electronic laboratory reporting as well in HL7. The syndromic surveillance data from the hospitals have been provided standards from ISDS and CDC.

I think the last one here is the area where we have the most trouble, is that reporting conditions by physicians or providers, professionals has not been standardized yet. The actual receipt at the state health department or city health department, wherever it is, may be variable. As we spoke about before the meeting, the Web service description language for each of these can be pretty variable from state to state. This is about proving that you can send the information, and the states are going to have to get on board with a way to receive this in a standard manner. The public health community has to get organized around this opportunity, and I think that what we're trying to signal here is that if we stick to the established standards that CDC has participated in developing along with the department or agency CSTE, ISDS, ARRA, the immunization registry organization, we can make progress here.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
I think I agree with you, Art. So what I would suggest then as a result of that is that for each one of these we specify specifically a standard and an IHE implementation guide for that standard to eliminate the variability, and hold the providers and the hospitals accountable to be able to send it in a defined national standard format. Then I think we'll see public health agencies use either translators or jump on board with that standard and we'll see real progress in this domain. If on the other hand we have customers feeling the urgency to check the box, having to implement whatever the state, county, or city might accept in whatever format we're going to see a lot of throwaway work and distraction.

W
We can ask the Standards Committee to recognize standards here, but we don't set them on the Policy Committee. That's beyond our purview.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
So we'll put in there, like in other places we say—

W
Right. We can recommend that standards are needed or ask the Standards Committee to look at that issue, but we don't set standards.

Carl Dvorak – Epic Systems – EVP
But we could set the requirement that they then don't have to submit if there's not a defined standard. I think that does fall back to the policy level and we may want to think about it at that level.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
Okay, then the final category is privacy and security, which was pretty much already accepted by the Policy Committee through the tiger team. So let me just tell you, remind us what was accepted. So remember there's the performer update to security risk assessment, that's from stage one. Added to this

is addressing encryption for data at rest and attesting to having a policy. This does not mean that you can't have unencrypted data at rest. It means you have to have a policy for how and why and how long you have unencrypted data at rest.

The next section is really direction, as we just stated a second ago, to the Standards Committee and in the interest of time, since it's ... I'm going to not read them off, but you can read them off. The third is a signal to stage three about the NW-HIN governance, although I hesitate how, how are we pronouncing this nowadays?

W
The last I heard it was NEW-WIN.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
We all win.

W
We all win, right.

George Hripcsak – Dept. of Biomedical Informatics Columbia University – Chair
And so that's already gone through, so I'm going to hand it back to Paul now.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay, we're going to conclude with some remarks about timing. I think this actually is new insight, it's not necessarily new information, because it's in the regs. But understanding how the certification regs ... with the meaningful use objectives and criteria is a key thing to know, and I think gives us new hope for coming up with a good compromise.

First, what I have on the screen comes out of the certification, and I owe this to a combination of Farzad and Steve Posnack, who helped us understand this better. So you'll see what's highlighted, so this is the progression of what stage you have to meet, what stage criteria you have to meet in order to qualify for your meaningful use incentives. It is only, if you look in the 2013 column, it is only the early entrants, those who qualify for meaningful use beginning in calendar year 2011, or fiscal year for hospitals, who have this dilemma in 2013. You'll recall the dilemma is the final rule does not come out until mid-2012 and a hospital could need to qualify as early as, or start the reporting period as early as October of 2012. That creates a problem, but it really only affects that highlighted group, the early entrants.

Below that matrix are the EHR certification program, and that can be thought of as phases, and this is how Farzad clarified this, so phase one you meet that certification criteria over the period of 2011 through 2012. In phase two that's 2013-2014. So in one of the options that we described to you last time that has new meaning this time, if we shift stage two meaningful use qualification from beginning in 2013 for that one group back a year you'll see that only that one cell, those who entered in 2011 get affected and the rest of the program is intact. That's the important lesson learned. Let me go through these options that we laid out before you last time, and also we're still open to any new suggestions.

So option one, everything stays the same, both the timeline and the reporting period, which is scheduled to be one year. Option two is to maintain the reporting period at 90 days instead of one year. The goal was to give providers an extra nine months to do the implementation. Option three is what I just showed you, which is delaying the transition from stage one to stage two by one year, which as I just showed you only affects that one group of folks who are going to be in a minority, the ones who enter in 2011. We used to have an option four, which was to divide stage two into a 2A and 2B meeting. For the functionality that already exists in EHRs, and that was trying to avoid the certification problem, we would just up the threshold and then for new functionality have another stage 2B. As we talked about it, because of this new insight in terms of how these timelines interact, that seemed unduly complicated for something that we could accomplish in option three.

Let me go over this colored matrix in front of you, and listed on the left rows are kinds of impacts we wanted to assess. For the three options how would it affect in row number one the goal of having the EHR incentive program put in place the IT infrastructure necessary to reform the health delivery system. That's the attribute we were assessing in that row. The second one, what does it do, one of these three options, to the vendor development timeline for new functionality? Four, what does it do to the provider implementation timeline, and as we discussed last time that happens in sequence after the vendor puts out a new product.

The next one is how does it interact with the October 1, 2013 deadline for ICD-10? People are not going to implement this and turn it on, on September 30th. Throughout 2013, they're going to have to deal with this. Ideally, of course, since it will require an upgrade to your EHR system, you'd want to do that in conjunction with qualifying for the next stage of meaningful use.

The fifth row is the operational complexity of how CMS and the states would manage a program where if we had our former option four with 2A and 2B and stage one, CMS and the states would be managing three different kinds of programs at the same time. You can see where that's going to go. The next row has to do with the measurement, CQM (the Clinical Quality Measures) recognizing, particularly if you reduce the reporting period from one year to 90 days all of a sudden your denominator changes dramatically.

Then the final one is Neil's contribution, which is, you know what, it's nice to have really aspirational goals and describe a world where we just will be able to have all we wanted to, to coordinate care, etc., but if it is so unmatched to the feet on the ground then it won't survive the whole NPRM process. So the notion of the probability of our recommendations being feasible and striking that balance where we need to go and where we are now, that row is to capture that kind of balance.

If you look at the last row, we've called it optimize the overall meaningful use momentum. This really addresses how Farzad opened up the meeting today. Already there's an escalator. Already people are even starting on the escalator, and there is a significant shift in the industry. We want to optimize that momentum not just for executing the statutory requirement called meaningful use, but for the overall game plan of creating a better health delivery system so that we raise the health and health status of our individuals and populations. So that's sort of a summary, almost a visual summary, of the lines above it.

As we talk through this in the workgroup, looking at option one, maintain the status quo; two, reduce the reporting period to 90 days; or three, shift that one cell by one year. As you look at that matrix, you'll see that it adds up to that last row, which says option three where we shift that one cell creates the time space for both the vendors and the providers to implement a new program. Yet it gives us a greater chance and the workgroup has to go back with a different set of eyes to say if you accept that to say well, let's make sure when we do reach stage two we are really nailing, as I think Larry said, that second bullet of getting information shared in an understandable way in the different systems so that we can work from things that have been really hard to date, care coordination and working on populations. If option three of shifting that one cell gives us that breathing room but also more time to look at criteria that may be a little bit more aggressive than we were initially considering so that we can hit the overall goals for stage two, that might be a win-win.

That's some of the thinking and we're open to your thoughts, one, on that line of thinking; but two, if you have another option please voice your opinion. Christine?

Christine Bechtel – National Partnership for Women & Families – VP
I have some questions after our conversation, was it yesterday? It's a ..... I think I get confused between payment year is one year but the stage is two years. So with that in mind I have two questions. One is, would the early entrants receive payment then for just doing another year of stage one, or is there payment held until they meet stage two, or both?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO

Under this option, you're describing option three, as I'm showing on the slide, and you would replace that highlighted stage two with stage one. In that option, yes, the early entrants, the people who qualify in 2011 would continue to get the third year payment for meeting stage one criteria. As we discussed, and really it's been the theory all along, this is to get people on the escalator, and that's why it's considered a floor. So it is in no one's best interest, including the organization, to stay in one place and just turn off the escalator until the next year rolls around. They need to, and the reason I say need to is it's a really painful state to be in a hybrid position where some of your folks are using some functionality, some of your patients, etc., so people are going to move once they get on this escalator. With that in mind, it is highly unlikely that folks who are early entrants already, early adopters in 2011, are going to stop advancing either accomplishing a higher threshold of existing functionality or frankly adding functionality that now would be in stage two.

Christine Bechtel – National Partnership for Women & Families – VP
So the follow up question to that would be, do we actually ask them to choose another menu item off of stage one to implement in that year? I don't even know if that's, from a regulatory perspective, possible. Then my last question is, does this impact the length of the future stages that this group is in? In other words, aren't the stages two years, so if they go into stage two is stage two a one-year stage for them or a two-year stage, and then how does that impact the length of stage three?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
The length of each stage is not set by either statute or regulation and in the final rule it was completely open, TBD for 2015. So you see already in the 2012 entrants they are moving from, well, we don't know what—

Christine Bechtel – National Partnership for Women & Families – VP
But if you enter in 2011, then your stage one is two years, your stage two is two years.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct.

Christine Bechtel – National Partnership for Women & Families – VP
So if you make your stage two one year and your stage one three years then are you suggesting that our recommendation, again, knowing that we don't make the decision is if stage two becomes one year for those entrants, which is 2014, or does it expand two years, in which case what happens to stage three for that group?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
That remains to be seen. But I think one way would be to go ahead and have the 2011 entrants go progressive stage three by 2015. In other words, in the original—

Christine Bechtel – National Partnership for Women & Families – VP
So they would effectively have a one-year stage two?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct. As other later entrants would have in the original—

Christine Bechtel – National Partnership for Women & Families – VP
I think that actually makes more sense, because that is how you would guarantee some movement on the escalator.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Correct, so Gayle, Paul, Carl and Marc.

Gayle Harrell – Florida – House of Representatives
Thank you, Paul. I think that is certainly the most reasonable thing for us to do. You get the biggest bang for your buck on it. As you all know, I have always felt that stage one was very aggressive in getting

people on board successfully to stage one and some of them may have only been qualified with 90 days in 2011. So really it's not going to be that much longer. I would absolutely propose that we go with your option three and move forward with that. It's, as I have said, a very aggressive stage one and give them a little chance to make sure that they're there. I'm totally on board with you on that.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Thank you. Paul Egerman?

Paul Egerman – Software Entrepreneur
Thanks. I guess I do this a little bit differently. I think Christine's questions about the impact on stage three are great questions. The idea that you would have stage two for some people only be one year I view as extremely problematic. It's very hard for a large healthcare organization to change, and to change, and especially what would be large changes, to do that once a year is just very difficult to do. That's an expensive proposition and it's expensive for the vendors to be able to do it. So I view that as problematic.

I have to say I'm also worried that if we do this alternative number three and we extend stage two out for a year, what we're going to do is we're going to continue to refine stage two and we're going to add more and more stuff to it, especially as the environment changes. So it may not necessarily look like what it does right now, so it may also have a lot of problems in terms of how to implement. My view is in terms of another alternative, I'd like to see either option one or option two, and the way we would do that is simply reduce the scope of what is going to be in stage two. The scope will be reduced anyway. We already saw with the first stages whatever we propose the NPRM is issued and CMS is involved and the scope is reduced. The scope is reduced in very much of a pragmatic way, so I think we should reduce our scope a bit and we should let the NPRM process and CMS do their job and reduce their scope to the point where at least option two is a reasonable option. To me that would continue the momentum that we have.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I understand the balance and you can do more later or less quicker. But one specific thing you said about upgrading, one of the factors here is the ICD-10 implementation, so if they do go into stage two in 2013 they're going to go into ICD-10 in 2014 and then stage three in 2015. So they have three years of product upgrades in a row, was one of our concerns as far as what it takes to do a conversion.

Paul Egerman – Software Entrepreneur
ICD-10 is viewed with this huge amount of fear. It's sort of like we're running towards the edge of this cliff and people are very worried about it. But I don't necessarily see how postponing stage two helps us with that process.

M
One last major upgrade to your systems, although what it does is it makes you change more of your workflow at once. That's the downside, is more of your workflow changes at once. The upside is one major upgrade at once.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
It was a consideration and we discussed that, the implication of the annual upgrades, etc.

Paul Egerman – Software Entrepreneur
Great. But I do think reducing the scope and sticking to the time frame, or closer to the time frame maybe option two, reduce scope, that would work.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. Carl?

Carl Dvorak – Epic Systems – EVP

I think it's helpful to remember how we got here and I think in part this crisis, first of all, thanks for, I think, coming up with some creative solutions to really what is a significant crisis. I think it would have led otherwise to a big penalty for early adopters and it would have likely created an unsafe situation for patients as providers are rushed through a very narrow window of time to move from stage one to stage two. And remembering how we got here and that the window between when the regulations are done and when you must be in production, fully live, with a complete and total year to qualify for stage two got very, very tight. So we had six or seven different options that could have alleviated this had we acted earlier.

One might have been to complete definition phase much, much earlier to allow for safe development and good usability engineering and to get those changes out to healthcare organizations who had time to implement tests, build their interfaces, train their users, and adopt the technology. But as that window tightened down, we literally got into the 90, 120 days sort of territory to get the final regulations, program them, test them, certify them, release them to customers, implement, adopt, train, etc., so one thing we want to be really careful about is how do we avoid this for stage three. But that technical window going so tight is largely what led us down this crisis and I do think there were multiple solutions. One might be to not put so much into stage two that you end up having to program a tremendous amount in that very tight window. I think many solutions here would work and I'm really thankful to see people tackling this one head on.

I would support three. I would also support a re-do of number one or probably number two option, where we reduced the scope, kept the scope to more of turn up the percentages of things that are already doable, just ratchet up CPOE, ratchet up these different percentages we already had in place. I'm still okay with either, I think. I think three is a perfectly fine solution, but I can see two, with really careful moderation of what gets into the requirements. If we're going to do something like maintain one or two, I would strongly suggest a customer oriented doability panel, maybe get a panel of all those who actually tested for stage one and have them sit in final judgment of what gets into stage two if we want to pursue that path.

The second and distinct point I'd like to make is I'd like to see us, if we could flip the slides back one more time, there is technically an unnecessary upgrade for first payment year '12 users who, in the middle of their stage one use will have to upgrade to a different ATCB or ACB certified version. I would like to still see us consider removing that requirement so that as long as you're on the same stage you don't have to do that unnecessary upgrade. I understand there are potential benefits, if people have the more advanced infrastructure they might voluntarily do more. But I think what we're going to likely see is a significant number of unnecessary upgrades costing many, many millions or hundreds of millions of dollars across the country that simply don't create any net benefit to the organizations or the patients. So I'd strongly advocate to tie the certification year to your stages and not have that artificial upgrade in there.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. We're behind schedule of course so if we can maintain our comments very short, please. Marc and then Larry and then Neil.

Marc Probst – Intermountain Healthcare – CIO
Okay, I'll talk quickly. First of all, I hope it's a common belief that hospitals and physicians really do want to use these things and use them correctly and that hopefully we're encouraging that use as part of what we're doing, and that it's not the opposite and that we don't have to—anyway, that's the basic premise. I was with 30 very prominent CIOs last week and in that group every one of them has a mature electronic medical record that installed and they've been using. I polled that group and less than 20% of them plan on attesting in 2011 and feel like they will be ready in 2012. And 90% of that group is feeling undue pressure in their ability to meet the requirements of meaningful use as we move forward. So these are mature users, these are very seasoned individuals, and they're feeling undue pressure on their ability to meet the requirements of meaningful use as we move forward. So these are mature users, these are very seasoned individuals, and they're feeling undue pressure.

Now, it isn't just meaningful use, you've brought the other issues to the table, including ICD-10. But overall all this does, and it's appreciated, and anything that buys a little time is appreciated, but all this does is relieve the people that are attesting in 2011 and meeting meaningful use. I'm telling you the vast majority of that group, mature users of systems that are represented around this table, as well as other systems are saying that they don't believe they'll make it in 2011, and we're not relieving any pressure for the group that's going forward in 2012. So I am a bit concerned, just from the reality of the people I'm dealing with and the pressures we're putting on the system.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think it was Larry and then Neil.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
So, yes, as one who's been saying we need more time from the final regs to when we have to implement these, option three looks really nice, so thank you. A couple of other things, way back earlier there was a comment about, we were talking about the wording about automated med administration. We actually slipped through a very hot topic, which is bar code med administration is a huge thing to implement and I don't want us to not know that that's a huge thing to implement and just go ahead and say let's do it because no one objected. So I would like to make it clear that that was a very big deal. It got huge value. It was also a very complicated thing and I think the examples of really exceptional delivery of being able to do that are pretty few.

The other piece that I haven't heard much talk about today is feedback from stage one. We're going to start to be getting real feedback on use. I think as we go forward and looking at what are in the measures and what the certified systems can deliver, that we might actually want to be thinking about instrumenting, learning about things that we're not regulating in terms of thresholds. But we're starting to collect data that tells us what real use actually is, which is a lead in to the word I like to use, I guess last month, which was "parsimony," that having put together all of this really good stuff we want to achieve to re-look at that as a whole. And ask the question I was asking earlier about are we making the right trade-offs between ... some things when we really want to move forward in particular areas and then leave it up to the fact that healthcare organizations have to make an organic whole out of this thing. If we said you have to do this one piece of CPOE, if they figure out how to do it well they're going to want to do it for all of the things that they need to do regardless of what the regs say. And that we shouldn't over-regulate ... this when we really want to extend things into things like information exchange, so thanks.

M
Neil?

M
Paul?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Good. Thank you. This has been – oh, Christine?

Christine Bechtel – National Partnership for Women & Families – VP
Thanks. Just briefly, I agree with you, Larry. I think we need more field experience and so that's why I think, and I think you said this, what we're trained to do today is to articulate a number of options. Because it occurs to me that by the time ONC and CMS are writing the final rule early next year we'll know even more about the field experience. So having an analysis of all of the different options, including the additional tweaks and nuances that have been proposed to be helpful, having that really detailed analysis of the specific problem we're trying to solve, which is a technical one, as Carl pointed out, in this timing of being able to program. Understanding the scope of that problem with respect to what's already entered by systems versus what's already largely part of systems but not certified, versus what is an entirely new capability, those are three different timing implications and I think we have to know in this timing analysis before we present it in June the extent of those three issues.

Then finally, I would say all three stages, well, at least stage one and stage two, have to evolve and should evolve over time. Stage one in 2014 or 2013 shouldn't be what stage one is today, because the realization that I had is that you have to use a product in stage—here's stage one entrant in 2013 or 2013, you have to use a stage, whatever, three, certified product at that point. So why would we ask people to not do some of the more technically advanced things that their systems are capable of doing when it would just create more work for them over time to go through the static stages. Does that make sense? So think about consumer access to health information in stage one, it's just straight access and it's not defined, there's no download.

By stage two, the system is going to have a download capability. Why wouldn't they use that? There's no workflow implication really to speak of for them. So they have to use the system even though they're stage one, that is capable of stage two or stage three functionality. So that stage needs to evolve, otherwise it's going to put more work on them I think in the end. I want to flag that as we think about our process for updating our recommendations that we need to acknowledge when we see more exchange happening, Direct is in the field, it just doesn't make sense for stage one and later stage two even to be static.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think ... superseding could come into play. Okay, actually that's a good transition into this final slide, which is two days from now we're having a hearing that includes specialists but also experience from the field, early experience from the field, representatives from the RECs, for example. We're going to take what we learned from you today plus what we learned from the hearing and some of these unfinished things, like the superseding, like active patient, etc., and finalize all of those things in this next month. And come back to, on June the 8th, with our final recommendations, probably for some tweaks before we officially pass that on to CMS and ONC. Now, recognize we're just part of a process and we're on the early side of this process. We do not have the benefit of rich feedback. Fortunately, over the next year from when we deliver our recommendations CMS and ONC will have more and more feedback. They're writing the final rules anyway, and they have this six-month time to write their NPRM and another six months before their final rule approximately. So they have all of the benefits. And also the way it works is that you back off on things as you go through the process. You don't add to. So the fact that ours might be more aggressive but still want to be very recent and balanced is still part of the process and I don't think we need to be afraid of that.

That takes us to the final rule being issued mid-2012 and we will come back with you with our recommendations or a couple of options with respect to the timing as well. Our goal is to provide our best thought, our best input into CMS and HHS without being definitive. Of course they get to decide, they get to weigh the options, and weigh what they hear.

So with that I think we will break for, unfortunately we're late, so we'll still maintain a 45-minute lunch and if we can resume at 1:30, we'd appreciate it. Thank you very much for your feedback.

Judy Sparrow – Office of the National Coordinator – Executive Director
I believe we're ready to begin, if everybody will please take their seats. Let me turn it over to Dr. Tang.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Thank you, and thanks, folks, for accepting our change in the schedule. Our next topic is the Certification Adoption Workgroup's report on a day long usability hearing, which I understand was very interesting, so we're looking forward to your report, and it's Marc Probst and Larry Wolf.

Marc Probst – Intermountain Healthcare – CIO
We were asked to hold a usability hearing and we had a very nice panel and a very lively discussion when we got the group together relative to usability and how it impacts electronic health records and HIE, and actually pretty much the scope got very, very wide. I want to thank Larry. Larry has done a tremendous amount of work, both in organizing it and holding the hearing and moving us through it, as well as aggregating the notes that we have. So he'll be driving us through it. You can see the purpose of the hearing. It was to get some real life experience with what people are doing with EHRs. We've

broadened that scope to beyond just EHRs but also how the public uses or usability issues associated with the public, talked about disability, some of the issues associated with usability and the disabled. Current state of what's happening in testing around usability, and that seems to be a relatively, at least relative to EHRs it's kind of a finite group of individuals and relatively new processes and then the potential for some future directions relative to usability. Usability, you can see the panels we had broken down from care providers, consumers, technology developers, how we measure and improve usability, and then just some market feedback and some new technologies that were out there. We also put a blog out there that we got some pretty good feedback from.

I'm going to turn it over to Larry to drive us through the meat of it and then any questions that you have we'll try to answer.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect

Thank you, Marc, for that great warm up. Hopefully, I haven't mangled comments. Farzad kicked this off with what he hoped we'd get out of this, and I think that they're actually useful for the committee to consider as actual goals for our own understanding of usability, so improving transparency. It was a pretty lively day and we've heard a lot of opinions, but at the end of the day I walked away thinking I've got a lot of opinions. There's still an awful lot to be done to actually ground this in, so what is the level of usability of the systems we have, what is the actual user frustrations that they've got, how much is this. Consistent patterns that we can actually act on and how much is this ... that we're going to need to sort through. A desire that technology fully supports care, and we've heard lots of comments about how if you get it right it's very helpful, and if you get it wrong it's not helpful at all, potential safety issues, a desire to enable constructive innovation, and Farzad was pretty clear that this was not going to go away with this one hearing. This is a continuing concern for ONC, that they want to be able to have good oversight on what's happening with usability, but the particulars we're still up for figuring out, that he very much said I don't want a binary decision. I'm not looking for if you're usable or you're not usable. But I do want some ability to actually measure this.

So walking through the panels, we had a pretty good mix of folks here, small organizations, large organizations, and so let's get to what they said. Basically time is precious. Whether you're counting clicks or counting interactions or counting keystrokes, or not counting any of those things but looking at the total time that you can actually spend with a patient, how do you make the most of that time. The usability of the system is really key, whether it's on the downside of the doc turns their back to me because they're so busy dealing with the computer, or the upside of they fully engage me because the way they're using the system actually encourages patient interaction, so sort of bleeding ahead in some of the other things.

One of the things that came out that I think was a really good reminder is we do tend to look at things like putting the information on the screen and checking the box and we're done and not what's the actual load this is putting on the clinician. The fact that they have to flip between multiple screens makes it much harder to understand a pattern that's going on. If you scan documents or even bring in documents as documents you're now opening and closing documents. You're not able to read through a series of reports in some kind of linear fashion. If those reports are of structured data, maybe you don't want to see the report at all. And if you've got a question about some particular on the report you'd much rather see the summaries of those structured things brought forward so you can look for patterns. Maybe that presentation is one that has no clicks because the design put the information on the screen to start with, so you don't have to go searching for it. It's actually there for you to make your decisions with. So figuring out what the cognitive load is and how to include that in how systems get designed, and including disability.

This was sort of a theme that ran through this, whether it's disabilities that the provider has, disabilities that the patient has, disabilities that the support staff has. That there are many, many styles of interacting with computers, whether we have a visible ability or disability or not, and the systems need to support a wide variety of those interaction styles. In our attempt to make one work better we may be making others work worse. The classic example is around GUIs. You make a very pretty presentation, but now the screen readers don't know what to make of the diagram you just put up on the screen.

Collaborative care, so I mentioned this briefly this morning, the notion that care doesn't just happen on one interaction of one provider, one patient, one computer system. But as a team of people sometimes that team is working together, interactive with the patient or interactive as a team. They might be doing an integrated care plan and so half a dozen clinicians of many kinds might be working together to define what's the approach for this patient, and how does that happen? How does it get recorded in the computer system? Are the people working independently, each one does its own little piece, and they know it's coordinated but there's no structure in the system, or are they cobbling together pieces of system to make it work.

Lots of complexity in the whole thing. So we made complexity be the heading here, because all these other things were back to cognitive load, with people just saying there's a lot going on here. So how do you build in good feedback groups so that when someone runs into a problem there's a way to say, hey, I'm stuck here, and maybe the way to get un-stuck is a 30 second user ed that gets you unstuck, or maybe it's I'm at a dead-end pathway that I was never supposed to go down. I didn't know not to go down it or whatever the problem is, how do I get feedback so that the problem gets fixed or people even know there's a problem. Interoperability surfaced here in an interesting way. Many providers have to deal with multiple vendors and multiple healthcare systems, and so those boundaries become, on the one hand, usability issues or interoperability issues or safety issues as information does or doesn't flow, isn't consistently presented in the different systems.

The switching costs, once you picked a vendor and you implemented their system way beyond the cost to buy the software, this huge cost to make it yours, get everybody trained, build your workflow around it, and two years down the road you say, I made a mistake. Well, that's a really costly mistake. You're probably going to figure out a way to live with that mistake rather than throw it out. The switching cost was also high, which also affects feedback. If you don't like the way your phone works even if you don't want to wait your two year for your plan to roll over, it's not that big a cost to buy a new phone. If you don't like the way your EMR works, you really have problems with it. The feedback to the vendors is also much reduced, because they're not seeing that quick turnover that would tell them what's going on. And usability is not just user interface. It's the whole of the interaction with the system.

We heard from a variety of consumers and so maybe I should state my plan. My plan is to run through all the slides and get to the end, where we've got some summary, and then open this up for discussion. Let's see if I can keep on track with that.

The message seemed to be on the consumer side that mostly they're not interacting with the systems, the user interface doesn't matter to them that much, but the information does matter a lot. So whether that's having access to the information, being included in the process of recording the information, providing feedback on accuracy or appropriateness of some of the information, getting information that will help them do a better job of being a patient. I think the statistic given us was that only 11% of the information communicated to a patient during an outpatient encounter is actually remembered. So any tools that we can provide that helps people better know what it was that I was just told about my health and what I need to be doing, that the information really was key to them. Collaborative, being collaborative partners, issues with privacy and security that clearly were not new but continued again in this setting, a sense that consumer expectations are on the rise. Someone basically said I have recurring pink eye, I know what goes on when it happens, and it's really a major pain in the butt to go spend half a day at the doc's office so I can get seen, if I can even get seen. Can't I just take a picture with my cell phone and send it in and get approval to get the meds from the pharmacy that's right here where I'm standing. So make it work for me. My expectations are I can do this in other parts of my life. I can send pictures of my friends to the other friends, restaurant reviews.

We got a big warning. This particularly came from ePatient Dave, but I think the caution is a general one, that when you repurpose data and it's pulled out of its original context it can mean something completely different. And he had examples of billing codes, which made complete sense in the billing context, but in the care context we're completely wrong. So one of the most telling examples was they were ruling out metastases to fingers and toes of this cancer and so they did a bunch of studies and said you're clear, but

what was coded in the bill was metastases to fingers and toes. What showed up when they attempted to populate a PHR was metastases to fingers and toes. So something that didn't happen and it was pretty severe, out of context, completely misinterpreted. As we go ahead with reusing data and trying to get good secondary use of data, or even just moving it from one care setting to another, being really careful that the coding makes sense in the new context.

We heard from technology developers that we're laid out in the right order. We went from one end of the table to another, from we need a lot of flexibility to we need a lot of standards. So I want to minimize that there was a lot of variation among these folks. There was universal agreement that usability is important, and vendors see this as a key differentiator. In fact, most of what people see of their product is the user interface. So while it may only be the tiniest surface piece of their software stack, it is what people understand is their product, so they see that as a very important thing to get right, and it's a very key part of their development process. Having said that, they build this beautiful, perfect car and then they go and deliver it and you get to someone's house and they say, oh, it won't fit in my garage. Can you shorten it by a foot? I'm exaggerating with my example here, which was not brought forward in the discussion, but it sort of felt like that.

We build these systems. We test them. We bring them through certification. Then we go to implement them and by their very nature they need to be configured for the healthcare setting, where they're going to work. Because the healthcare settings are so variable themselves, we can't give them a cookie cutter answer. They have to configure it. So what gets implemented in the healthcare setting is not what the vendor built, hopefully it reflects a lot of their guidance in terms of what makes a usable product. But the actual screens users see, the options they get are often controlled by configuration, which is something that the health system is choosing to do, and changes usability, all of those choices about how the workflow goes and creates options for improved usability or for a decrease in usability. Agreement that we need to assess usability in context after implementation, so this got the lovely phrase "ethnographic studies," so go out in the wild, see how stuff is actually used, and then build on the next version based on that feedback. We got a great spectrum of views on how much or how little regulation was appropriate.

Then we brought in some of the folks who do usability testing and they have a short list because after I went through all of the notes and the workgroup discussed this, we said really they were telling us two important things. One, that there is a science of usability testing, but its application in healthcare is still being worked out. We don't have a long history of a lot of formal third party usability testing. So the best we can give you is a framework for assessing usability. The use cases become critical. We had some pretty heated discussions about whether you could build on the criteria that's in certification as usability base, or whether that was just an arbitrary check off that the application can do these things. It wasn't built around clinical settings. So we'll see with the next group. One of the things that they've tried to do is actually build usability around some settings.

I think probably the most important thing that came out of this—and we'll come back to it at the end—is that there is a growing sense of the provider community and the testing community, as much as they were at odds during the hearing. That they're actually working together and beginning to build a community of practice of how are we going to apply usability here. There's a NIST workshop day in about a month, just before our meeting, and the dates are coming up, where hopefully there will be more progress on that.

We had here this panel really split; the first two speaking about existing testing programs, and the last two speaking more about design and where things might be going in the future. So both CCHIT and KLAS get feedback on use from clients. In one case CCHIT, it's somewhat artificial, they've built scenarios that are meant to mimic real world use, and they have real world clinicians walk through those scenarios and rate the products that they're trying to use. So it's an artificial setting, it's not in an actual healthcare setting, but they have a set of protocols, go through, do these steps, and assess their usability. KLAS is more a model of surveying people who have implemented systems for feedback on how things they're using, which they then publish.

So in both cases we have public reporting; in the CCHIT case it's optional, but something like 80% of the folks who have been through their process have published the outcomes, in the case of KLAS they're making their results available as part of what they're doing. Probably the bottom line on this is one size cannot possibly fit all. All the variability in how people implement, the variety of roles of users, the differences in workflow, the need to accommodate different users' strengths and weaknesses in terms of how they interact with systems, measuring usability is not going to give us a single number that means very much.

Then we moved into sort of design, and we got a mini course in how one designs something. As just a side footnote for all of this, in parallel with our meeting two of the sort of founders of modern design were holding a week-long program in D.C. that week on usability, including usability of complex systems. So we could have spent all day in class for a week to get current best practice on what's being taught on how to design things as user standard design. Finally, we heard from the SMArt project, one of the SHARP grants in Boston, that's looking at can you build componentized software so that people can create apps for that. And if you have a small enough app you can then break out of the high cost of transitioning, and hopefully be able to create more opportunity to make the applications work the way you need them to work.

We received a lot of feedback on the blog—we had 34 comments—and they were basically consistent with the testimony that we heard at the hearing, the need that the information actually communicates effectively, don't just look at clicks, look at whether the information is usable. That getting transparency is really important, because there were examples in the blog of problems with usability, but given the very nature of a blog you couldn't tell if that was a onsie or a widespread pattern. So usability is in the eye of the beholder. Many factors. We've heard a lot of frustrations; clearly people would like systems to be more usable than they are, and if it were easy we would do it.

I think I'm going to stop, give you the next steps, and then we can talk about where we're going. So our sense as a workgroup was that we should provide a formal handoff from what we learned back to the committee and to ONC in the form of a letter. We have a workgroup meeting scheduled for the end of May, I don't remember the exact date, 23rd, 24th, 25th, somewhere, somewhere near the end of May. As a Public Workgroup hearing it will be virtual on the phone. Then at next month's committee meeting we'll come back, and there's a NIST workshop the day before our next committee meeting on June 7th. There was tremendous passion around usability, and there were pockets of science around studying usability and its impacts, but it certainly didn't feel from our hearing that it's broad or well proven out, as Larry mentioned, as far as being a science. But boy the passion around it, it was pretty evident.

Any questions from you all? Carl, did you have anything you wanted to add? You were pretty engaged.

Carl Dvorak – Epic Systems – EVP
Yes. I think on the morning I was there from both a talents and a committee member. I have subsequently discussed this with the folks at NIST, I think as I went back and looked at that and the entire … panel there were 25 people there, and I think, as I understand it, only Christine Sinsky was there simply as a practicing physician. The other 25 panelists broke down into a cluster; I think there were four vendors there, six or seven who made a living studying usability. I had suggested to NIST that we try to make sure that if we do subsequent panels on this that we actually recruit actively for the voice of the work-a-day doc who really does work with EHRs and doesn't have any other interest or any other special side thing, and try to make sure that we really draw that voice out and isolate it properly.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Neil and then Paul.

Neil Calman – Institute for Family Health – President & Cofounder
So the other part of that would be to get the patient's perspective on two things, both the usability of the systems in terms of portals and other things that the patients might be involved in. But also their perception of what's going on in an encounter, because I think the usability with the provider in the

system has a tremendous amount to do with the patient's experience. So those would be, I think, important inputs. I don't know how you go about doing that.

Marc Probst – Intermountain Healthcare – CIO
I guess to support that, Neil, one of the things that came up was the huge variability in how people configure exam rooms, the kinds of devices they use where they're working on a PDA, mobile phone sized device or a tablet or a classic workstation or a large multi-screen workstation. Screens that face patients and the provider, stuff that swivels; I mean lots of issues that would affect engagement, as well as usability.

I'll just say that probably out of stupidity that was the only thing we did when we started was kind of sat and did a mock-up of sort of what patient's experience would be with different kinds of set ups in the rooms and stuff, and it was remarkable. We ended up with a particular design that works quite well, but in lots of them it didn't. But I think it's critically important because of what you hear back from patients in terms of their experience that the providers spend more time with the computer than they do with them, and that they're running back and forth between the exam table and putting things in the computer, and people can't see what's on it. I think it's huge, and I think in terms of the public perception of what we're doing it's really critical.

Marc Probst – Intermountain Healthcare – CIO
Paul.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Well first let me just say, Marc and Larry, you just did a terrific job running this hearing, I mean it was an amazing hearing. I don't think I can remember any that we had this amount of like audience participation; people were like applauding and clapping, everybody was like laughing. It was an extraordinary thing, so you guys you did a terrific job, and Larry did a fantastic job putting together the—pardon me?

M
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Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I heard August is doing a great job, also. I just wanted to make sure I say that. But it was all an amazing process. And the members of the workgroup did a great job, I mean you, Carl, and David McCallie not only participated, but you turned out to be targets of the discussion also. So it's unusual that you have to wear a seatbelt when you attend one of these things, so I thought you guys handled that extremely well.

An interesting observation that I heard on the discussion was actually made by our colleague, Joan Ash, that I wanted to repeat is as we went through the hearing that actually nobody came up with a definition of what is meant by the word usability. So everybody still had their own definition, and exactly as Carl suggested, I think their definitions depended a lot on their perspective. So the perspective of the vendors was usability related to user interface. In other words how the user interfaced with screens, but when you look at the physicians they seem to have a broader view of usability. So their view of usability included like information exchange, whether or not the information was available to them when they needed it, because that affected their usability of an Electronic Health Record, so that was like a very different view, and the consumer view was also very different. So you look at Dave deBronkart talking about like well just taking a picture and being able to transmit that to a physician, well that's a different usability concept of how the system is used.

So that's just an observation, but the comment I'd also give is relative to what Farzad said this morning, the interesting challenge that the workgroup will be discussing in the next meetings as part of the next steps, is well what's the role of government in all of this process as we listen to this. That's a very good question to try to understand how you create a marketplace where all of these things evolve and we understand that the amount of enthusiasm that was represented by the participants perhaps could also be related to the amount of frustration people have with these systems, too. Maybe that's why there was so much participation is that there are a lot of people who are frustrated that they can't seem to get done

what they want to get done. So the interesting challenge is well what's the role of the government in terms of trying to make sure the marketplace is responsive to those frustrations.

Marc Probst – Intermountain Healthcare – CIO
Gayle and then Paul.

Gayle Harrell – Florida – House of Representatives
Thank you so much. I couldn't agree with you more, Paul, on usability being in the eyes of the beholder. It depends on your perspective as to where you come from as to what is usable and how you define usability. As far as the role of the government is we're spending a lot of money on this, so there is a role of the government to make sure that those dollars spent wisely. The marketplace has a role in selling the product out there that is, and certainly when the provider is purchasing it they're going to be looking for different things.

So as far as from a patient perspective, and I hear this in my office day after day because I am kind of the bottom of the funnel, I get all the comments to my office because people know how passionate I am about this. And I can tell you from the provider's perspective, I'm sure you heard this and I unfortunately could not attend the hearing, providers have a real concern that the amount of time they're spending on this are they getting what they really want out of it. They're changing their workflows in the office, the office staff gets very frustrated, and you wind up there's a lot of angst out there as people are adapting. The question that I get asked is at the end of the day is it going to be worth it; will we have expended a large amount of public dollars to do something. The amount of time we're spending, the efforts we are putting into it, are we going to get the value out of it, is it going to be worth it for that provider, and most importantly for the patient.

From the patient's perspective I get the constant comment is I'm not a person in the exam room anymore; the doctor is interacting with the computer, not interacting with me. So I think certainly within meaningful use I don't know that usability should be a criteria of certification-required criteria. I don't think that's the role we want to use that role of government entity to make sure that we have the usability. But I think from the vendor's perspective and the marketplace perspective that message needs to be strongly out there that the patient needs to be involved and feel that they are a person in that exam room, and that the provider needs to use as little time as possible. It needs to be as easy as possible for that provider to put in the information that is required to be useful to them in making clinical decisions.

So you have your work cut out for you.

Marc Probst – Intermountain Healthcare – CIO
Thanks. Paul.

Paul Egerman – Software Entrepreneur
Thanks. One of the genesis for even conducting this hearing or focusing on usability was out of the EHR safety topic and how we heard from a number of folks how the usability of the system can impact the patient safety. Did you explore that in your hearing? I know, based on what Carl said, only one panelist really was a practicing doc, but certainly can suggest that our experience is that there's a number of … were sub optimal or even poor user interface design leads to systemic risk for patient safety events. Did you explore that and did you get feedback on that?

Marc Probst – Intermountain Healthcare – CIO
So I would say that we got some general feedback about that, that usability does affect safety; the cognitive load stuff was in part saying that, the there's a lot of information here how do I find what's relevant was saying that. I don't know that we got particular here's a solution or here's a well-focused problem.

Larry Wolf – Kindred Healthcare – Senior Consulting Architect
But it was thematic, whether it was a training issue and how that associated with usability or whether it was access to data and interoperability. I mean it was thematic in most of the conversation that safety

was impacted by usability, but the definition of usability was as broad as what Paul was talking about a little while ago, so I don't think we specifically answered that question, Paul.

Marc Probst – Intermountain Healthcare – CIO
And while we only had one practicing physician, and we know she was because she couldn't be here, she was actually providing care … time to do her testimony. But we had other folks who are here who are hands on docs and/or in organizations providing direct care. We could have had more given that there were 25, but we also wanted to cover some other bases. Carl?

Carl Dvorak – Epic Systems – EVP
Yes, a couple things. There were a couple of other docs, but many of them were co-director of a REC or an ONC grant recipient on the study of usability or something like that as well.

A couple things. One, one thing we brushed into in the discussion that day was some of the likely outcomes from some of the meaningful use requirements, and will they be perceived as usability issues when they impact clinicians directly. So one specific example was the smoking cessation categories that the likelihood that the average doc is going to look at those categories and sort of utter the words who in the heck came up with this is very high. So one thing we want to be careful about, I think, in adding to this usability discussion is thinking about usability all the way back to the requirements phase, which ultimately does dictate design and dictate what the clinicians experience. I think certain items that are direct, like smoking cessation, how do you really differentiate those categories.

Other items are a little bit more indirect and I think come from certain meaningful use requirements or quality measures that would assume you have a magical pot of all the data when in fact you see just a slice of it. So how clinicians who only treat a segment of that patient's care will deal with some of these broader ranging quality measures when they just simply don't have the visibility into the data that one would need to drive those measures, which I think will come up in the specialty and subsequent discussions.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Good. Well thank you very much, and thanks for conducting the hearing and reporting. Let's see, next we're going to hear from the Information Exchange Workgroup on the Individual-Level Provider Directories, Micky and David Lansky. Let's see, are either of them present? Oh there, right, see I seen right through them.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Hiding in plain sight.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Great. Thanks, Micky.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Thank you. I don't know if David is on the phone?

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Are you still on the phone, David?

David Lansky – Pacific Business Group on Health – President & CEO
Yes, I am here. Thanks.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. Take it away, Micky.

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That was ....

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. Sorry.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Okay. So, David, feel free to weigh in at any time. I just wanted to thank the committee for allowing us to present these recommendations that, as Denise says, hopefully final recommendations on our long excursion in the provider directory world. Which I think has been a very fruitful one, but has taken a lot longer than I think almost of us thought it would because of the complexity of the issue.

As you will recall, first off with members of the Information Exchange Workgroup, as well as the Provider Directory Taskforce who have displayed incredible tenacity, I think, over many, many months in tackling this issue. So I personally, as well as the entire workgroup, owe sort of a debt of gratitude to all the other members of the workgroup for the hard work here.

But let me just dive right in. What we've been discussing in the area of provider directories is really an approach to having some type of way of having a national coherence to a provider directory concept that both has sort of a national coherence in a way that would allow us to think of a directory being sort of nationally available in some way. But, like with all of our Health Information Exchange conversations, sort of is something that follows the contours of the local variation that we know exists out there in the country. We in earlier work beginning really late last summer or last fall, thought that it was a useful concept based on a lot of feedback and a public hearing and a lot of expert testimony to separate the notions of an entity-level provider directly from an individual-level provider directories. Whereas the name implies an entity-level provider directory would have the unit of observation essentially be an entity, a clinical entity, whereas the individual-level provider directories would, as the name implies, be an individual level one where you could be populated by individuals, individual clinicians, and would provide a variety of functions for those who want information at that level.

In December, we presented recommendations with respect to entity-level provider directory, which the Policy Committee did approve, and now we're talking about the individual-level provider directories. It's important to think about how these two fit together. So we just wanted to provide some very quick background on what the entity-level provider directory concept was that was approved, where the Standards Committee is in thinking about that, because I think that's helpful for us in thinking about the context, and then dive quickly into the individual-level provider directory. I have a plane to catch, so I have every incentive to do this very quickly.

So in thinking about the entity-level provider directories for a second, the idea was really to lay a foundation for a nationwide registry system or provider directory that would comprise multiple federated individual directories. Essentially the contents would be partitioned off or would have instances in multiple different places where different parts of the content would be in different instances of the directory. But they would all have uniform standards with what we said at the time would be rigid conformance to create a national-level directory that would sort of be Internet style and architecture information maintained at the entity level, as I said. And would be a useful way to facilitate discovery of key entity characteristics to allow or to enable HIE transactions from entity-to-entity. So essentially, it's saying it's a way of providing an electronic phone book to deliver information to the doorstep of an organization, and then that organization will then take the responsibility for delivering it appropriately within their own organization. So that was at a high level the idea there.

The recommendations were to have the Standards Committee create a set of standards for a single national registry with multiple registrars to incorporate this in meaningful use stages two and three and an NwHIN participation—I guess we're saying now, or new-WIN or old-WIN. And also to require Beacon and state level HIE programs to integrate this within their architectures to the extent that they start to embark on provider directories.

On the next two slides what I've done is just pulled from the Health IT Standards Committee Privacy and Security Workgroup that then took sort of the recommendations from the Policy Committee and then started to think about that, and have really sort of taken it down a couple of levels to try to think about the

details. I thought it was useful to steal these slides and show them to you just so you have sort of a picture in your mind of how this might fit together. So the idea here depicted on this is that on the left hand side you have sort of a registration process. Whereas it describes you have multiple registrars who are responsible for bringing in entity-level information and storing it perhaps as a registry themselves that together would make up the registry system that on the right hand side could be queried by authorized users or authorized entities for the purposes of conducting Health Information Exchange transactions.

That then leads to a set of questions of well where do we need standards and where do we need policy; what sort of further elaboration is needed here. As this slide depicts, again this is from the Standards Committee Privacy and Security Workgroup, what they teed up was that well what that would mean. If you follow sort of a sequence here moving from left to right, is first off is this set of policy needs, which we can get back to in a second, but a set of standards for structure and content of the entity-level provider directory, a standard for submitting that information to the national registry. So how would all these fit together; how would I having an individual directory submit information, let's say, or make that data, expose that data to others so that they could consume it in a way that makes sense. Then on the other side standards for query response of the directory, so if I actually wanted to be able to consume that information, and then perhaps certification criteria for EHRs to be able to support some level of functionality.

Now these are just things that they have teed up as areas that they want to weigh in on, and they're in the middle of that process right now. They've defined their initial priority, as I suggest, over on the right hand side there with respect to query response or how one would be able to use that information. What they did note is that there are still some policy questions that need to be defined somewhere with respect to is there a registrar accreditation or certification process, what would be the guidelines for verification, validation, registrar reciprocity, a whole bunch of things that we intentionally did not get into as well. We kept our deliberations at a fairly high level. But those are policy needs that would then have to come back to either presumably handle at the staff level within OSE or perhaps back at the Policy Committee at some level.

So as we think about diving in then to the individual-level provider directories some of the thoughts are that, as I said, whereas the ELPDs were defined to be national in scope the idea of the ILPDs was that they would be sub-national. First off recognizing that many already exist in the market, so sort of a fundamental concept here is that no one should have to rip and replace anything. Furthermore that there is a base to build on, and a pretty strong base that's a very heterogeneous base, so that's one of the challenges, but there is a huge base to build on when you think about all the directories that are out there. Certainly many more will be built through state-level HIE and Beacon programs, as well as by Medicaid, Public Health, what have you as they move forward. A lot of location variation, and certainly the common characteristic among them is that the ILPDs maintain individual clinician level information, though the scope of information across these varies, because there hasn't been sort of a national or uniform use or standards for any of that.

The idea would be that an ILPD should facilitate basic Health Exchange functions by enabling discovery of key individual characteristics in mapping those individuals to entity addresses. So that's where these would connect up with that entity-level provider directory concept, that you would essentially have a set of ILPDs that are created sort of organically. Meaning that there is no sort of national perspective on how an ILPD would necessarily get created, but to the extent that they do get created and follow these standards according to a set of policy and governance rules, perhaps, that the link would be that the individuals map to registered entities on that national ELPD. Then the entity-level information would in principal contain the information that would be needed to get the information to that individual provider who in most cases that would be a one-to-many or probably a many-to-many kind of mapping. Providers are in three, four, five clinical settings, that would be that kind of mapping that the ILPD would have to be able to track.

So I've described it in a very sort of simple, generic way. There are many variations of that, but that would be the idea where conceptually you might think of these as being two separate things. Linking them, the idea was that linking the ILPDs with that ELPD concept, the national ELPD concept, will

establish in effect a national registry system that is locally flexible, but nationally conformant. It would allow mapping individuals in the individual-level provider directories with entities in the ELPD to the greatest extent possible, and certainly would be likely to be very complex with these many-to-many mappings, and for a while there would be many gaps that would exist I think we would all have to recognize. But that said there seemed to be a lot of value in thinking about these as being sort of two different concepts and an approach to them.

So we considered a variety of use cases as we thought about well where would one use an individual-level provider directory. As you can imagine sort of a whole variety of Health Information Exchange use cases came up, whether it's sort of the—and I'll put this all in quotes—"a push or a pull, or a push and a pull", all of the query response versus Directed Exchange kinds of scenarios. So whether you have clinical exchange or a lab to clinic exchange and then certainly the common workflow across these scenarios was that a submitter needs to send a message to an individual provider, the submitter has some information on the individual, but perhaps not complete information that would allow the electronic transmission and unambiguous addressing. The ILPD is used to identify all possible locations, and then with additional information perhaps the submitter is able to identify, select the appropriate location. The ILPD would link, either on demand or it would already be linked to the ELPD, to obtain the security credentials, the entity addressing, the entity capabilities, the endpoint capabilities of what transactions, Partners Healthcare, let's say, or Palo Alto Medication Foundation, is able to transact, and then would be able to transmit the message accordingly. That would be sort of the idea of sort of a workflow that would cut across any of those scenarios, obviously with some slight variations.

All the use cases would obviously be contingent on following all Federal and state privacy laws and rules, and certainly any kind of query response has that consent and privacy and security overlay that would need to be figured out as a part of this. We we're not trying to dismiss that, but that would just be another dimension for those particular types of transactions.

In the appendix, we have a more detailed description of the use cases that I won't go into here unless anyone has questions about them.

So what we did in the way of recommendations is we divided up our recommendations into two kinds of categories; one is kind of policy guidance and the second is what we would call best practices. The idea is that overall that we wanted to be able to have some policy guidance for entities that are going to be creating these kinds of directories or would like to have directories that are conformant with a national approach leaving open the question of exactly how that policy would be sort of administered over the long run. We have some immediate policy levers that are part of our recommendations, but there's certainly a longer-term question about how all of that would be sort of created in a full-blown kind of business and operational model and policy model. But that said, what we wanted to be able to do is at least offer something that said that here are some areas that would be required to enable creation of a national type of system, and B, what is the level of standardization or the minimal level of standardization that would be needed to make all of this work. So those are the kinds of things we wanted to address in the policy guidance.

In the best practices were more along the lines of things that came up along the way as we were diving into this that we thought we would just offer to those who were embarking on this. In part responding to the urgency that we were hearing from the ground up, though there were many organizations, particularly the state-level organizations, whether it's the state-level HIE programs or the Beacon programs, who very specifically are charged with creating directories in some way, shape, or form. So they have sort of a need for this, so we wanted to be able to offer as much as we could to those organizations.

We made those recommendations in four domains: content, which we broke into what individuals would be represented in the ILPDs and what attributes of those individuals ought to be contained there. Functionality, what core functions ought to be supported, and we broke that up into discoverability and the mapping to the ELPDs. Security access and audit, we broke that up into access, how to deal with sensitive content, data integrity, and audit; and then, finally, immediate policy levers, which were about interoperability, EHR certification, CMS existing databases, state HIE programs, and Medicaid.

So on the next slide this is just a high-level depiction of some of the connections that we've already described. This is just one way of thinking about it, so I won't belabor the point to just say that the connection between these would be that you could have multiple different, obviously heterogeneous ILPDs in many places of the country. California yesterday just issued a very large RFP for the statewide provider directories that they'd like to rollout in California, it was a 222-page RFP. So a lot of detail there that actually follows very much on these concepts, and indeed uses the terms ELPD and ILPD, not surprisingly, but it does break it out in this way.

It has the same conceptual approach, which is to say that you have an ILPD concept, which is individual in nature, that maps to an entity-level provider directory concept that is entity level in nature, and there is a linking there at the entity level and the affiliations that individual providers would have with entities. The information that is required for routing, addressing, all of that, which is not something that an individual provider would determine on his or her own but that the entity that he or she belongs to is really the one that determines that, that's contained in the entity-level provider directory. So that was kind of the conceptual approach that we took. It doesn't mean that it has to be that way; it was just a conceptual approach.

So before diving into the recommendations just wanted to give a little bit of a scope consideration here is that the areas that we did not cover were really along the lines of more sort of finely honed operationalization of the directory concept. Which is to say that we didn't weigh in on well what at the organization level, who should be responsible for driving the creation of a National-Provider Directory Service, at the business model how should it be paid for, and then finally governance, how should the National-Provider Directory Service be governed, and by whom and with what authorities. The reason that we didn't is because there are a lot of different moving parts, both Federal and state level, and it seemed like that we'd be getting too specific at too early a phase in the process here. Not that these questions aren't important, but I think that we would need a little bit more guidance and a little bit more of a structured framework to be able to dive into those questions.

So our recommendations are designed to be one level above that to be able to provide some policy guidance that could then sort of be further elaborated depending on how some of these key questions get decided. Just give you a sense of that, for example, on the governance question our provider directory concept, you could imagine, could be something that is a tool of governance. Meaning that it is a way of sanctioning those who are a part or have agreed to a form of governance, of end NwHIN governance, and that that is a way of sort of giving visibility and hopefully is the attraction to being a part of the governance. It is used to enforce governance, which is to say that you're not allowed to participate in the provider directory if you haven't sort of agreed to the governance principals. Or, on the other hand, it could be an input to the governance process to say that there is a separate process to determine who belongs in the directory, and the NwHIN governance process takes that as a given that if you are a part of that directory you have met certain requirements and certain criteria. So we'll take that as a given and that's a part of your qualification, for example. So it's really about ex post or ex ante. So those are the areas that we didn't cover.

But if we just dive now into the recommendations, as I said we had four, and I'll crispy try to go through these, because I think most of them are pretty self-explanatory. At the policy guidance level, and I won't dive into best practices ones unless anyone has questions, I think the policy guidance ones are sort of the sharpest and probably the ones that we're seeking more sort of approval of. But the policy guidance level, as I said, we had individuals and attributes. On the individual level the thought was that the individuals that could be listed in the ILPD should obviously at least include all individual healthcare providers who are licensed or otherwise authorized by Federal or state rules to provide healthcare services to support the health of populations. One question that has come back from the Standards Committee is whether it should be limited to that or should we add others. For example, the California RFP that was put out yesterday does include health plans, does include others that aren't in the HIPAA definition of provider, it includes medical device manufacturers, for example. So there are others that one could contemplate, but as we thought about it we at least thought at the outset that it ought to be limited to providers.

The attributes of those individuals ought to include a variety of demographic information that would allow that kind of discoverability that we talked about, last name, first name, provider type. What have you that's all listed there in the way of being able to identify the provider and be able to identify where they practice and what the different venues of contact would be. Then some more structured identifiers, like MPI, DEA, state license number, what have you, as well as the entity affiliations, which would then be the mapping to the entity-level provider directory. I should add that it's not necessary that everything that is listed as an attribute is discoverable, that there may be some things that are useful to have in the directory but that aren't generally discoverable, and could be only discoverable with the consent of the providers or according to certain rules depending on who is searching for the information. So just because the information is in there doesn't mean that anyone can look up anyone's DEA number, for example.

In the way of functionality, we had two specific recommendations. One would be about the discoverability, that the idea of the provider directory first and foremost was to allow discoverability of an individual provider in their practice location to support a broad array of HIE functions, and the concept would be that that ought to be human discoverability as well as machine discoverability. Second, that tight mapping to the nationwide ELPD to allow that seamless electronic addressing, how that actually plays out because there are a variety of ways of doing it. One of the comments that we got back from the Standards Committee is that we have separated out these concepts. From a Standards perspective they might think of them as one in the same, and whether they are instantiated as two different concepts, like we described here and as they're doing in California. Or it ends up being on in the same, for example is one of the federated ELPDs also an ILPD, that would be a local decision or a decision of those who are launching the service, but there's nothing that dictates it has to happen one way or the other. It's that mapping that's the important part of it.

In domain number three with security access and audit, access we would recommend should include clinicians and support the administrative staff with obviously well-defined roles and role-based access policies for users and operators of ILPD services. These policies should be set at the local level and consider Federal and state law regulations and accepted practices. Again, remember, we're talking about the ILPD; the ELPD has a national or a nationwide system could have sort of nationally prescribed rules for how that works, but from the individual level there could be a variety of ways of thinking about it. Again, just turning to the California one, because it's very detailed, just an example, one of the things that is specified in their RFP is that only those who agree to be listed in the ILPD would be able to access the ILPD. That could just be a local decision about how that works.

The second would be about sensitive content, which as I said, there is need to be recognition that there is some information that you may not want to make generally available depending on who is able to access it to begin with. But things like state license number, DEA numbers, just because, as I said before, just because they're in the directory doesn't mean that they are discoverable or generally discoverable.

Data integrity is a key ingredient to a successful directory in this way, so one of the policies that we would strongly recommend would be ensuring that the data contained in the ILPD is appropriately protected from unauthorized changes, and the individuals that are authorized delegates have the ability to maintain their own data in some way. One of the things that we heard over and over again was the ability to be accountable for your own information, and indeed, this is bigger than just directories, have a stake in wanting that information to be accurate would be a key to the success here. That people aren't going to populate a directory just for the purpose of having a directory, they're going to populate a directory because that directory enables them to do things that they want to do. Then, finally, an audit trail, policy related to strong audit policies about changes that are made to the directory and by whom, particularly if you allow users to make those changes, as well as who has access to that information and under what circumstances would be an important part of this as well.

Finally, and zooming ahead to the immediate policy levers, as I said there are certainly a broader set of levers that one could think about, but those sort of, with so many moving parts, it was very hard to sort of specify exactly what those might look like. But some that came to mind as we just thought about the near

term here and the levers that are immediately available to policy makers was, one, related to technical interoperability standards, and as I described it would really be parallel to what the Standards Committee is doing right now with respect to ELPDs. Thinking about that for ILPDs as well, both with respect to being able to provide the administrative kinds of functions of how would I populate an ILPD and how do I make changes to it, as well as how do I query part of that information on the other side of it.

Perhaps considering Federal EHR certification standards, as appropriate, that can have both of those dimensions as well; both would be able to provide that structured content to it so that it would seamlessly allow the ability to populate it, but also be able to consume that information as well.

One thing that came up over and over again was that CMS maintains some fairly large databases—namely the NLR that's being built now in PCAST—that have a lot of information in it that could be quite relevant to ILPDs and those who want to create ILPDs, and perhaps could be important sort of feed data to feed those to get them started. So our recommendation that that data ought to be made available, obviously under certain terms that need to be determined, could be an important part of energizing the creation of these. State HIE cooperative agreement funds to establish state-level ILPDs should be directed to adhere to whatever standards and policies come out of ONC and CMS related to both the ELPDs and the ILPDs. And then finally, as we look to CMS and all of the various activities with state Medicaid agencies, whether it's in Medicaid Health IT plans, MITA, state EHR incentive programs, all of that seemed like it was great opportunities to think about the connection between provider directories and how all of that could fit together.

So I apologize for the whirlwind tour here, but that was some of the fore sets of recommendations. Let me open it up now either to David or any other member of the working group who is here and certainly who weighed in on this as well.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Thanks, Micky. David, do you have anything to add?

David Lansky – Pacific Business Group on Health – President & CEO
My compliments to Micky for managing to summarize all that work in a few minutes. Thanks, Micky.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Thank you.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Comments? Questions? Carl.

Carl Dvorak – Epic Systems – EVP
I have a couple of questions. First, Micky, there was a comment you had made, no one should have to rip and replace anything, and that caused a little bit of concern in that much of what we're doing with meaningful use is creating rip and replace scenarios in other domains and EHRs and such. What concerns me in this one is could we do something now that would practically signal the market of HIE providers and signal the states who receive Federal funding for HIEs that we will tolerate one standard ILPD interaction mechanism and one implementation guide for it so that we don't have a proliferation right now. And just to tell them your worrying a little bit, and that if we let everybody do what they want, set of standard of no rip and replace that's just going to lead to a very difficult path to standardize that.

I saw in the recommendations for B and for E that you touch it a little bit, but I'd like to kind of tie that together and say that the Federal EHR certification would allow for a single Federal standard and a single implementation guide for that standard with regard to ILPDs and ELPDs. That would signal the state HIE programs, the marketplace for HIE software and technology, that they will need to be prepared to conform and conform quickly to a single standard to avoid some proliferation.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Right. Yes, and I think I probably overstated the idea of rip and replace. I think the idea was to try to sort of strike a balance between how are we able to leverage what's already out there—because there are a lot of directories out there and lot of what we might call ILPDs out there—and what level of standardization might they need to adopt on their existing system for the minimum data elements or content elements. And also these are operability signs, but at least on the content elements that would allow it to be interoperable and aggregatable across, so I think that would be the idea. Now whether that ultimately means a rip and replace I guess that would be almost a sort of case-by-case kind of scenario.

Carl Dvorak – Epic Systems – EVP
Yes. I think the value in those registries will be in fact the entries in the registries, not necessarily the technology that supports it. I do think sending a clear signal now would go a long ways to make sure that people follow it along closely and implement at a single standard that could be universal. The other smaller comment was I'm assuming that you'll have time attributes in the ILPD mapping back to entities so that you'll know when they practiced at that entity, otherwise it would be very difficult to track down which organization to ask for that data.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Right. I mean I would think that it would be, but we don't have it here and maybe we need to, about whether it's active or not active.

Carl Dvorak – Epic Systems – EVP
Well and historically what the time duration that they practiced with that entity was so we can map—Many requests will cause us to go back in time to look at other places to find where that doctor was, not just where they are at this moment.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Yes. Sure. So that's a few different things it sounds like.

Carl Dvorak – Epic Systems – EVP
Yes.

Gayle Harrell – Florida – House of Representatives
Thanks, Carl. Now this, to me, the directories are the key point in HIE. If you don't have an accurate directory and if they don't authenticate who the people are in that directory and make sure that they are who they say they are, you have the ability for huge problems with privacy and security, and I know this is something everyone is concerned about. So the privacy and security aspects of that and the validation and verification of who the entities are in that directory and how you get into that directory, especially down at the local level, is extremely important. The fact that you really haven't gotten into governance in how those decisions are made and who's going to verify what the mechanisms are for verification that that individual says who they are they really are. And who's going to validate that they are a licensed physician in the State of Florida and make sure that they have the ability to practice, and a whole variety of details is extremely important.

Do you anticipate having any specific recommendations on that or is that going to be left to the Privacy & Security Tiger Team?

Deven McGraw – Center for Democracy & Technology – Director
… already.

Gayle Harrell – Florida – House of Representatives
We've done some work on it, but it has to be integrated together, and this is the entry point, this is the gateway. As you build your HIE you have to have those directories, and if you have false persons or entities in that directory they then have access, and you have to develop that trust within the system. So this is a basic building block on which the privacy and security trust framework sits in knowing who those people are.

M
It's not necessarily the case, though, if you're in the directory you'd necessarily have access? I didn't see that in the recommendations.

Gayle Harrell – Florida – House of Representatives
It starts the process for access. It opens the door. It's the first key; it's not maybe all the keys, but it's the first entry into it to get in that directory.

Deven McGraw – Center for Democracy & Technology – Director
So just to remind the committee that we had a set of recommendations on digital certificates that were at an entity level that required entities to demonstrate that they were in fact a real entity in the healthcare system to a certificate authority and we're moving now into the phase of thinking. Which we're going to talk a little bit about when we get our declarized minutes, but in terms of sort of what are the criteria that those entities that actually gets delivered a certificate. I'm not disagreeing with your points at all, but I think we don't load all of that set of expectations onto a directory, but instead we do have to marry that up with the additional sets of policies that deal with authentication, identification as a ….

Gayle Harrell – Florida – House of Representatives
But the question is who is responsible to validate that? Is the entity then responsible to validate the individual level directory? I mean where does the responsibility sit?

Deven McGraw – Center for Democracy & Technology – Director
I guess that depends on whose directory you're talking about. So we have a lot of governance questions that we've been teeing up for recommendations towards that that are all supposed to be wrapped in the Nationwide Health Information Network governance rule, which ONC is currently drafting. I suspect that the expectations will not vest with one single entity, but with Federal and state regulators to the extent that there are legal obligations involved with respect to data transmission to the right place. It's likely a whole spectrum.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Right. I think that all of these questions are exactly why we had difficulty going down to that level. I mean just to take a very specific example, again not to keep pointing to California but just because they just released this yesterday, just if you look at the State of California the way they are thinking about it is that there will be a central certificate authority, Cali Connect. I'm sure that Paul can tell me about this than I'm going to tell you, but that Cali Connect that organization will be the central certificate authority for the entities and for the individual providers, licensed professionals in the state. There's a trust framework that would allow some of those entities to be able to basically self-attest for their licensed professionals, and they're going to manage that centrally.

But if you're a non-licensed professional, like a mid-level or a medical staff, let's say, or administrative staff who can have access, they'll push that to the entities. So there's a trust framework with an explicit chain of trust. As you start to think about well then how does that roll up to the national that's where those complexities just start to get very, very elaborate. Without any sort of further structure in the governance conversation I think it's hard for us to sort of think of every scenario and say okay in this scenario it will be this, in this scenario it will be that.

Gayle Harrell – Florida – House of Representatives
That trust framework and making sure that the public has that understanding of how that's going to function is extremely important.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
I think that's true. I think we may end up having to comment on the NHIN governance or NPRM when it comes out, because we have had so much that goes into that so we may activate that workgroup again. So that Devon's prediction about the five minutes does not come true please keep your comments very short, so Devon and Paul aren't cut off.

Deven McGraw – Center for Democracy & Technology – Director
I will. I think it's a good set of recommendations. I put up my timecard to react to the suggestion, Carl, that you made about us calling for a single standard for ILPDs and a single implementation guide. I feel again like we're straying a bit into the purview of what the Standards Committee does, which is to decide when a single standard is necessary versus thinking about functionalities that need to be present from a certification standpoint. So I wouldn't be opposed to suggesting that Standards explore this for whether standards are needed, but I don't think it's our job to state that in fact standards are and then just look to them to fill in the blank.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Paul Egerman.

Paul Egerman – Software Entrepreneur
Yes. And following up on what you just said, Deven, so if you look at recommendation 4B it does say that there will be a Federal EHR certification standard, which does imply that there will be a single standard, because I don't know how you would certify it otherwise.

Deven McGraw – Center for Democracy & Technology – Director
Well I mean I don't mind it the way that it's phrased, but I think we're straying, again, into someone else's purview when we say it's a single standard, I realize it's … a singular word. But by modifying it to say a single standard or a single implementation guide I think they have a process, they have a set of sort of overarching policies that they follow when they determine when a particular standard is necessary to specify, and I don't think it's in our purview to dive into that territory.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Well that's also why we put as appropriate there, to leave open to the Standards Committee would have the flexibility to do it as they thought appropriate.

Paul Egerman – Software Entrepreneur
Okay. And so that was partly also what I was going to comment about, because we have Federal certification standards as appropriate, but we have certification standards without anything in meaningful use that necessarily corresponds with it. And would another way to do 4B be to handle this with NwHIN governance as opposed to with EHR certification? I frankly wonder if that would be more consistent with some of the issues that Gayle is raising, and might also make Deven a little more comfortable on some of these issues as to whether standards is singular or plural.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
In fact, I think that's what we did mention when ELPD came up is to wrap it into the policy standards that would be set up by the NHIN governance.

Paul Egerman – Software Entrepreneur
Yes. I also say you did a great job, like it is really hard to do all of this stuff, and you're doing a great job to navigate through it. My comment would be if you change that to NwHIN governance then I think it all starts to fit together a little bit better.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
So is that just 4D or are you saying—

Paul Egerman – Software Entrepreneur
Four B is really … for—

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
B, baker.

Paul Egerman – Software Entrepreneur
B as in, yes, as in bait. The first thing I saw was the … it was dated.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Okay. So that would say Federal governance standards? I just want to make sure I understand.

Paul Egerman – Software Entrepreneur
NwHIN governance, or is it NWHIN governance.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
So we're placing in addition to the EHR certification language or replacing it?

Paul Egerman – Software Entrepreneur
I would replace it with that.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Replacing it with that.

Paul Egerman – Software Entrepreneur
Yes, which is the way we handled EPLD is also with NWHIN, however NWHIN governance, and that way we can coordinate all of that interesting stuff.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Now why would you replace it? Wouldn't you want to use all the levers available?

Paul Egerman – Software Entrepreneur
I don't know, it's just it's consistent with what we did with EPLD, and it's just so that we don't weigh down the certification process with stuff that's not really directly related to what an EHR is supposed to be doing.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Right. I guess the thought here of adding the as appropriate was that as we stared to further develop sort of the standards approach in this that would at least be a suggestion that they ought to think about that as they're thinking about it, but not to necessarily say that it ought to be an EHR certification standard. Marc.

Marc Probst – Intermountain Healthcare – CIO
Thank you, Micky, this is a great job that you've done with the team. I've participated in some of this, and I know how hard it is. On 4E you start out by CMS should consider, and I'm wondering whether that should be broader and just say HHS should consider. We have the FDA, HRSA, CDC, and we might want to step away from what we are immediately dealing with, which is ONC and CMS, but just try to look at this more broadly as a Federal initiative and how we might rephrase that.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Yes.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. Carl.

Carl Dvorak – Epic Systems – EVP
Two things. One, Deven, back to the point, I think if our eyes are on the mission at hand it is reasonable to pull the lever of try to recommend one standard. We're comfortable pulling other levers, both direct and indirect. I think in terms of guidance it is important what is said and done through this committee does signal many other people as to what will likely come, so I would like to use that opportunity wisely, and I think this is one of those places where we might want to pull that lever.

Secondarily, Micky, one of the things we dealt with early on in the whole directory discussion was entity level versus individual level. We made a conscious choice to let entity level move forward more quickly because of the huge benefit case; it's much simpler construct and we also recognize that with the individual-level provider directory you quickly fall into a quagmire. So I just want, as we sort of see these join back up on one document, I'd like to make sure that we do everything possible to advance entity level directories as quickly as possible, because it covers a tremendous amount of exchange cases, and not let them become joined again and both suffer the same fate in the quagmire.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Right. No, I completely agree with you. The idea of the entity level was in a way the ILPD it gives hooks to hang things one.

Carl Dvorak – Epic Systems – EVP
Definitely right and understood.

Micky Tripathi – Massachusetts eHealth Collaborative – President & CEO
Yes.

Deven McGraw – Center for Democracy & Technology – Director
So my response, Carl, is that when the recommendations come from the workgroup that has had the time to go through the details on this and they don't come to us suggesting that we, as a Policy Committee, recommend a single standard. I personally do now know enough about the standards environment, which is thankfully why I'm not on the Standards Committee, to be able to say that one is necessary here, especially knowing the discussions that they have had about when a standard is appropriate to pick from a governmental perspective. When there still is enough market variability that we need to let some stuff play out before we anoint a single winner. So I am not comfortable with changing this letter in any way to suggest that the Standards Committee anoints a single standard.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. So you need an approval, correct? The only thing I heard which was changed, and I think with consensus, but we can check that, is Paul Egerman's change about instead of an EHR certification standard it's really covered under the NHIN governance set of policies.

Paul Egerman – Software Entrepreneur
Maybe another way of doing it would be just say certification or NwHIN and let ONC decide which one it wants to use as a policy lever.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Okay. Well to establish some kind of common policy about this.

Paul Egerman – Software Entrepreneur
Yes.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
The EHR one is a little hard for me, because we don't have a policy equipped for standards to come in and accept it; that's where I'm coming from. When it seems very natural it's a voluntary process you either subscribe to the NHIN governance policy set or not, and it seems like this has to be part of—I mean you can't be actually exchanging without this. But that's what made sense to me. Do you want to go with the or or the—I'm not sure I see how it …

M
If you want to go with the first one go with the first one.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Seems to me it's an NHIN governance requirement, and Micky is nodding as well. Okay with that modifier does the group accept ….

M
I'm sorry, I had one more … about expanding—

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Oh you … Yes. That's good. Okay. And the group understands both of those amendments then? Does the group want to— Is there a motion to approve these, the policy guidance in the four domains. Is that how I'd interrupt your recommendations? Great.

Paul Egerman – Software Entrepreneur
Paul moves.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Paul moves. Okay. Any further discussion? All approved? Any opposed? Abstention? Good. Thank you very much, Micky, and thank you, David. I'm returning more than five minutes, Deven, and you can go beyond.

Judy Sparrow – Office of the National Coordinator – Executive Director
They can always have six.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Well I think we have to give them more than six that's for sure.

Deven McGraw – Center for Democracy & Technology – Director
Well we can actually— Yes; we're going to stay here, Judy, because we don't have any slides. We have no slides and we have no specific recommendations. We are instead going to just give you an update on where we're heading next so you get a sense of what may be coming your way in the future, and if you have any feedback to give us on some of the things that we're considering.

So the first thing that I want to talk about is we obviously have a lot of potential topics that we could take on; this might the tiger team that lasts in perpetuity. As Gayle pointed out, there are important issues and they're very complex and there's a lot to deal with. But we had a sort of initial schedule that we had scoped out and we had kind of come to the end of the list of initial topics that we had pulled together, and so we spent some time on our last call talking about what our next set of topics might be in order. We also have an open comment period on the FACA blog for the public to provide us with some input on next topics. We're accepting those comments on a rolling basis, although we did ask for people to try to get them in by today in order to try to inform our schedule through the summer, because we'd ideally like to scope some things out, have a schedule through August, and set everyone's expectations accordingly.

So some of the issues that were raised by members of the tiger team as potential avenues for exploration include making sure that the policy framework that we've been populating based on the nationwide data sharing principles that ONC has adopted is in fact complete. At least for the push transactions, because we've largely been focusing on those types of exchange models and for the purposes of stage one of meaningful use, which is the sort of more narrow set of use cases as far as data exchange is concerned. We sort of felt like we had gotten to the finish line on that, but we wanted to be sure that there wasn't anything we missed.

So, as a matter of fact, we did not really get to the issue of amendment of data in the category of both an individual's right to request a correction, as well as data and the institutional obligations for data quality and accuracy. That is actually a topic that we are going ahead and moving on to take up, because it also came up in the patient matching context, so we kind of had already parking lotted it then anyway, so it's kind of a natural segue.

But some of the other issues that came up were privacy and security issues related to query and response, or pull models, which sort of definitely were surfaced in some of the PCAST workgroup discussions, and there's a whole array of issues that need to be resolved there. Issues associated with

hosted EHRs, some discussion about that. Some of these patient portal issues that Carl raised and others have raised and the discussion there's obvious transparency issues, privacy and security issues. We teed up a few of them on our last call, but there are a number of others that we haven't quite gotten to yet, and that's obviously an important set of issues to resolve. The Office of the National Coordinator is working on a gap analysis under the HIPAA security rule, and we're going to take a look at that when it's done and see if there are some things that need to be done there. Then the other issue that was surfaced was unauthorized internal access, which is still a breach, but is nevertheless a vexing problem for organizations. I feel like I see a newspaper article at least a month about people getting fired for inappropriately accessing, and that is obviously connected to role based access controls, but that's not the sole policy or technology lever to deal with that.

So I want to turn it over to Paul to talk a little bit about another issue that we've started to take up because we've been asked to and that I didn't include on my initial list.

Paul Egerman – Software Entrepreneur
Right. The other issue that we're taking up relates to digital certificates. If you remember in, I think it was November, the tiger team made a recommendation, Policy Committee accepted, about digital certificates. Which are certificates that address some of the issues Gayle talked about in terms of making sure at an entity level that the organization really exists and is who I guess it says it is when it does a transaction. We submitted all those recommendations to the Standards Committee, Standards Committee actually came back to us and asked for clarification or elaboration on one of the aspects, which is the qualifications for a certificate authority, which Micky mentioned in his presentation, but the certificate authority are those organizations that are authorized to issue the certificates.

The question is or hierarchically well what are the qualifications of those organizations, and it's actually making it a little arcane, but it is actually a very interesting issue and it related involving something called the federal bridge and how you communicate with federal government agencies. So we established a taskforce that is going to be addressing that issue. We received excellent support from Deborah Lasky on the taskforce and also Carl Dvorak at ethics, and extremely helpful in giving us some technical information to get us started in the entire process. The taskforce has a goal of getting a recommendation together back to the tiger team and then back to the Policy Committee for our June 8th meeting, so hopefully we will have that for you.

Deven McGraw – Center for Democracy & Technology – Director
So the taskforce is doing its work on the certificate authority issues, and we hope to make very quick progress on that set of questions. We will simultaneously be trying to make progress on the data accuracy/correction/amendment issue over our next tiger team call, which is I think it's May 23rd, but don't quote me on that. It's coming up.

M
There's quite a list of topics. Can I ask one? It's not gone unnoticed that a number of health plans have started acquiring all of these data exchanges companies. One is to get information from one place to another, but I imagine there might be some thought that they would do something with the data in the middle or afterwards. Has your group either thought about that, discussed it, or is that something that is on the list? Is it a concern to you and it's on the list?

Paul Egerman – Software Entrepreneur
It's now.

Deven McGraw – Center for Democracy & Technology – Director
It is now. You're not telling us something that obviously we're not aware of. We hadn't formally put it on the list, but it's an interesting set of issues.

Paul Egerman – Software Entrepreneur
It is ….

M
Not contemplated by HIPAA for sure.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
So, Paul, thank you for bringing that up, because that has become an issue in HIEs and choosing vendors. I think it's a very serious one. Gayle.

Gayle Harrell – Florida – House of Representatives
I'm going to go to Paul's issue on the certificates. In looking at those certificates and who is going to have the authority to issue those and how that's going to happen since on the individual-level provider directory they are the one are we going to have a certificate mechanism for them that they issue? Where are you going with the individual level since they are viewed, at least in the presentation, the HIEs would be running individual-level provider directories would they have a certificate?

Paul Egerman – Software Entrepreneur
From our perspective that's currently unknown. We are looking at the issue of the qualifications for the certificate authorities for the entity level, because that was the previous recommendation that's what we were asked for clarification on. I suspect whatever we come up with might be applicable should it become necessary to issue the certificates at an individual level. But so far there has not been a recommendation for certificates on the individual level, so since there's no recommendation requirement for certificates on an individual level there's not a requirement for the certificate authority to issue them. And so that's … in the process.

Gayle Harrell – Florida – House of Representatives
Then the question comes on that individual whoever is running that level-level provider directory if they don't have to have a certificate what accountability is there?

Deven McGraw – Center for Democracy & Technology – Director
So I think that's one of the reasons, and it's a shame Micky had to go, but I did have a discussion with him about this. I think it's one of the reasons why that one of the recommendations on the policy guidance for ILPDs is that they had to be tightly linked to the ELPD, because the expectation is that in most cases the digital certificate holder will be at the entity level and not down at the individual provider user level. But it's not as though that would be a foreclosed option if an individual practice wanted to say we have five docs and they're all going get their own digital certificates versus getting one for the practice, and then determining how the information that comes into the system gets distributed.

Gayle Harrell – Florida – House of Representatives
That needs to be clarified.

Paul Egerman – Software Entrepreneur
Yes. If you look at the use cases a common theme in the use cases on the ILPD is frequently to use the ILPD to simply determine what is the correct entity to communicate with. But the architecture itself has to be clarified, and you ask a good question, Gayle, because it hasn't been yet.

Gayle Harrell – Florida – House of Representatives
It has to be. Yes.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Linda.

W
Quick observation. When you are dealing with the conversations related to amending information make sure that you have a strong group of health information management professionals in your conversations that will help you go the right way.

Deven McGraw – Center for Democracy & Technology – Director
Yes. No, thank you for that suggestion, we actually did reach out to the folks from HMA to get some help, and we're getting some help.

W
Perfect. Thank you.

Paul Egerman – Software Entrepreneur
Excellent comment. Good. Good.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Any other comments, additions to their extensive list? This is not a tiger that's going away.

Deven McGraw – Center for Democracy & Technology – Director
We might have to rename ourselves. That was supposed to be for quick work over last summer, and it stuck.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Well it's just like well as far as us saying this is a marathon and not a sprint, it's not really. It's sprint to the marathon right. Anything else? Okay, why don't we open for public comment then please.

Judy Sparrow – Office of the National Coordinator – Executive Director
Right. Yes. It's now time for public comment. Anybody in the room who wishes to make a comment please queue up. Please identify yourselves, and remember you have a three-minute time limit.

Mr. Singerman.

Richard Singerman – TrustNetMD – Chief Innovation Officer
Hello. Is this working okay? Dr. Richard Singerman from TrustNetMD. We're social media for helping hospitals and physicians collaborate and build trust. I just wanted to comment briefly on the user interface program from the other week. I think there really are major safety issues and safety studies that need to be conducted. There was the example stated that when you rent a car, whether it's a BMW or it's a Toyota, the accelerator is always on the right and the brake is always on the left. People almost laughed at that, but to be quite frank about three months ago a very close relative went in for neck surgery to remove a lump only on the left side of his neck, and the image in the diagnosing physician's office showed L, R on the image and it showed up on the left side, right hand side. And when he went to get the surgery, wouldn't you know it, the images were reversed; it still said L and R, but L was down on the right hand side, R was on the left. Actually the nurse who came in and the doctor who came in to do the surgery actually marked the wrong side, and he actually had to argue one minute before going under anesthesia and have it checked by three times until they acknowledged that R and L had actually been switched.

Now that's a very simple example, but with very serious consequences where an error would have actually led to serious harm. So I think this whole notion that the vendors spend all this wonderful time designing systems, and yet there's all this flexibility with implementation, really begs the question. I believe I can't recall if there was an FDA person or not at this hearing, but this whole notion that something gets certified or something gets approved for use by the FDA in a very set, rigorous environment. Yet there's so much tailoring that could go on at the end that you're really almost giving the physician a device that really wasn't certified in that fashion. It's starting to stream so far off one really wonders about the opportunities for harm, like the very simple one I described. So thank you.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Richard. Chantel.

Chantel Worzala – American Hospital Association – Sr. Associate Dir. of Policy
Good afternoon. Thank you so much for a very informed and engaging conversation; it was very lively. A couple of comments on stage two meaningful use. First, on the timing, absolutely appreciate the consideration you're giving to a delay in stage two, very important and needed to ensure that implementations are done well in a considered manner and in a way that's safe for patients. I want to make clear that providers do not believe that the delay would in any way justify an increase in requirements for stage two. I also want to reemphasize that it does not mean that stage one should be redefined just because someone is at stage one for three years, in fact hospitals that first attest in fiscal year '11 had no possibility to be in stage one for an entire twelve-month period. Most of them it will be a three-month "payment" year.

Would also say that as we look forward you may actually want to combine both a delay with a 90-day reporting period in every first year of a new stage going forward, because it is the reality that vendors do need to roll these systems out across all of their customers. We have 5,000 hospitals in the United States, we have 500,000 physicians, probably more than that, I've lost track, that is a lot of work to be done, and we want to make sure that this is a regular order of business. You laugh about the sprint, but that pace cannot be maintained, and we cannot ensure that these systems are supporting safe high-quality care if it's always a rush.

On the actual content of the requirements for stage two the presentation did not include a synthesis of the recommendations, but getting to Tony Trenkle's Christmas tree my count was either 28 or 29 objectives for eligible hospitals, all of them required. That would be a 50% increase in the number of objectives from stage one to stage two. So as you continue this conversation please be aware that we need to stick to the goal of parsimony, we cannot solve global warming through meaningful use, nor can we solve all of healthcare's problems through meaningful use, and we do in fact need continued flexibility. We cannot assume that it is all right to dock payments to either physicians or hospitals because they missed one meaningful use objective. So thank you for listening.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you very much. And next.

Mike Kappel – McKesson Corporation – SVP, Government Strategy & Relations
Thank you. Mike Kappel with McKesson. Like Chantel, I did appreciate the thoughtful presentation and discussion that went on regarding stage two content and the timing. But I was very pleased to see that in this discussion and in the presentation of stage two meaningful use criteria there were many more areas where you were very clear and specific regarding stage three criteria. I also appreciate that we identified three areas that need a lot of work between stage two and stage three. These are the transformative areas: care coordination, population health, patient engagement.

I can only urge that I know you've been through a continuous sprint, but that if you can focus in the three months that follow the June recommendations on stage two with an emphasis of reviewing every criteria for stage three and including or asking Tony Trenkle in CMS to include the stage three recommendations in the NPRM. So you can get the feedback now, we'll be in much better shape and not have to face the same delay when we get to stage three. I just remind all of you the more clarity now the more transformation later. Thank you.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Mike. Next please.

Jason Byrd – ASA – Director, Practice Management, Quality, & Regulatory Affairs
Hello, I'm Jason Byrd. I'm with the American Society of Anesthesiologists, which itself represents over 46,000 members. I'm here to talk more generally about raising awareness about the dilemma that we face. I think what happened when we had stage one, we've been talking about stage two here, we're still struggling with stage one meaningful use requirements, what happened when the regulations came out is I think a lot of folks felt that anesthesiologists are hospital based physicians, would be exempted from the requirements. As they were implemented, and based on place of service codes, the reality is with the

nature of the evolving practice of anesthesiology is that most anesthesiologists will actually be included in the incentive payment, which we welcome. The dilemma that we face is that the way the criteria had been constructed for stage one meaningful use is there are a lot of measures that are not applicable to the practice of anesthesiology.

So what we have done over the past several months is submitted letters and submitted a comprehensive chart, which is included in your materials, that identifies recommendations and clarifications that we seek that we think can construct and twist the meaningful use requirements so that anesthesiologists can be included and can provide. And the reason that we think that it is critical is that when we talk about the perioperative setting, where anesthesiologists are the continuum for patients from the preoperative setting through the surgical procedure to the post-operative setting and into the pack U situation, they're the continuum for the patient. The Anesthesia Information Management Systems, which are the anesthesia specific EHRs, are collecting innumerable data about that patient, literally monitoring every heartbeat. We believe that that will help collecting that data, putting it into registries in the future, which we've begun, will help improve patient care, it will help us reduce costs by looking at a number of things, such as length of stay, OR time, etc.

Why we are here is to get our issues and dilemma on your radar screen in the hopes that you can help us with recommendations to ONC and CMS to consider anesthesiologists, consider the dilemmas that we have, consider the analysis that we've put many hours into to try to modify the requirements, and hopefully that can help our cause.

Judy Sparrow – Office of the National Coordinator – Executive Director
Great. Thank you, Mr. Byrd. Next please.

Matt Quinn – NIST – Computer Scientist, Information Technology Laboratory
Hello. I'm Matt Quinn from NIST. As the guy from NIST, my job is to talk about standards and measurement science, specifically measurement science in the domain of usability. There is a definition of usability, in fact an ISO one, 9241. It's the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use.

M
It sounds like a NIST definition.

Matt Quinn – NIST – Computer Scientist, Information Technology Laboratory
Absolutely.

M
….

Matt Quinn – NIST – Computer Scientist, Information Technology Laboratory
Well there are many dimensions of usability, and some are more important and more objective and subjective than others. When my colleagues at NIST, specifically in the visualization and usability group, the group that works with the Help America Vote Act in certifying voting machines, works with lots of three letter agencies on security type issues, and I was also working on health IT, saw the quote, "Usability is in the eye of the beholder." There was some freaking out, I have to say; telling a human factors engineer that measuring usability is in the eye of the beholder is like telling a civil or structural engineer that the usability of a building is in the eye of the beholder. Just as a similar structural engineer, where they should start by designing a building with consideration of safety, as my colleague Dr. Lowry from NIST testified at the hearing a couple of weeks ago, that's exactly where NIST has begun in its usability evaluation protocol. And ironically, this protocol is based on existing industry developed usability evaluation measures and metrics that are in use by other government agencies that have been developed in conjunction with their industries.

Finally, I'd like to announce a couple of events. One of them is a NIST workshop that we talked about on June 7th. The goal of this is to both gain constructive technical feedback on our draft usability protocol,

which we've been working for the past month with a variety of stakeholders from across the healthcare spectrum, as well as to build a collaborative community to advance the science and applications of science in this field. This is not something that this is a great role for NIST as a catalyst of innovation in industry to bring people together, to help them convene, to look for opportunities like the metaphorical accelerator and brake pedal where we can work together, where healthcare organizations can work together. Also May 25th and 26th the Human Computer Interaction Lab at University of Maryland Ben Shneiderman's group is putting on a presentation to talk about both health IT and the application of human computer interaction more broadly. He's had 40 plus years of experience. Thank you.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you very much. Next we have?

Lauren Fifield – athenahealth – Senior Policy Analyst
Hello, I'm Lauren Fifield from athenahealth. For those of you who may not be familiar with athenahealth, we are a provider of software-enabled services. The electronic health record component, athenaClinicals part of our company, is one that I have been heavily involved in, and in particular with meaningful use. Because we are a provider of software-enabled services our job doesn't just stop at the certification of our EHR, but also supporting our clients in gaining meaningful use payment. Our CEO has even gone so far as to guarantee that payment. As part of the meaningful use team I oftentimes curse him for this. I have worked on a meaningful use pilot with four of our groups, and we are now ushering all of our providers through the meaningful use measures. I want to make sure I'm respectful of time here.

So a couple of things: I do understand that other models of software require extensive implementation and installation, however I do want to provide a voice from the cloud model of software to say that option one and option two are completely viable and our providers will be ready for meaningful use stage two in 2013. We are able to deploy stage two certified software with one release of software at no upgrade cost. So it's not to say that I think we should do this for the whole country, but it is possible.

On the note of pushing back the stage two, I do think I do agree with the concept of an evolving stage one. Already in stage two recommendations I've seen different numerators and denominators, and so I do think it doesn't make so much sense to have some providers pursuing one numerator and denominator … for three years where they'll only have to go back and update information that they've been collecting for three years. People are creatures of habit, I know I am; I hate this Android switching from Blackberry.

On the note of a cloud model, again there's kind of an agenda here, I would love for Paul and Deven to kind of hear more about their collaboration with the NIST Cloud Consortium. There are different security and privacy standard requirements for cloud models. I think looking at more of them, not just in the EHR space but in other spaces, and I would love to participate. Ed Park is someone who has been really engaged in this space. He has a brother that I think many of you may be familiar with named Todd.

Then I guess just one last note. Having worked with providers hand-in-hand for six months, seven months now going through meaningful use, looking at their data, seeing how they're doing, keep in mind that at the end of the day software can only bring you so far, training can only bring you so far. There is an element of change management. What we've seen from the pilot, as an example, is recording demographics you'd think that you can only make five fields so elegant, so eye catching, so useable. That's been one measure where people where people have struggled the most, because at the end of the day it is staff that are collecting this information. They have known their patients for years asking about race and ethnicity is quite difficult. So there is a change management element, so as you're thinking about scope I really do recommend thinking about what changes, not just in these huge health systems, but in the small practices across America. Thanks.

Judy Sparrow – Office of the National Coordinator – Executive Director
Great. Thank you very much. Next in line.

Lindsay Hoggle – American Dietetic Association – Independent Consultant
My name is Lindsay Hoggle, and I'm a Consultant to the American Dietetic Association, 71,000 professional organization of food and nutrition experts. The discussion today was wonderful, thank you. I think it just shows the complexity of these decisions.

My first comment is basically just to put a plea that we not back away from allowing consumer download and viewing, or whatever the word that you want to use, mainly because of privacy and security reasons. The best analogies I come up with have to do with my children. When I was young I used to run through the neighborhood and there were few guidelines. Now, in today's world, I would no more let my child run through the neighborhood. As the securities and threats increase then the rules increase, and so perhaps a middle school child might be able to stay in the neighborhood when they drive, and there's an extra threat then there are different boundaries and rules. I think, staying with the kid theme, I think we just have to realize that this is going to be a constant communication to consumers to be careful and to understand the risks, and understand that the risks are going to change.

My next comment had to do with standards, and I understand the complexity of who owns which standards. I'm going to bring up again that in stage one meaningful use the only standard required to report is medication allergies. While most vendors include food and environmental allergies, it creates some confusion on what you're supposed to report, and I would hate to see those allergies all move away from not being grouped together and sent together, particularly when they go to a PHR. So for that reason I would encourage perhaps a gap analysis on standards and evaluate which ones have models that can be used now. Put some on the radar for stage three, including food allergies, because the overall thing that you're looking at is the impact on the patient, and the food allergies can be just as dramatic as the medication. Thank you.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Lindsay. Last, but not least, we have Mark Segal on the phone for just a short minute. Mark, we're running out of time.

Mark Segal – GE Healthcare – Director Government & Industry Affairs
Yes. Thank you. Mark Segal with GE Healthcare. First of all, generally would like to express support for the issues raised by Chantel Worzala and Mike Kappel, and thank you for your focus on the timing issue. Certainly option three looks very workable. Would also agree with considering having a 90-day reporting period for the start of each new stage.

On meaningful use stage two I'd like to just quickly call out one issue, the new proposal to provide some summaries of care electronically, which I think is terrific, and the 10% approach for hospitals makes sense. But I'd like to suggest that the Meaningful Use Workgroup revisit their specific recommendation for eligible professionals. Clearly efficient measurement of this measure is important for both hospitals and eligible professionals. But given the importance of this measure to push health information exchange use and development of an exchange infrastructure I'm concerned that 25 exchanges during the reporting period will not really do what is needed, especially with the elimination of the step depth test objective and measure. So I'd like to respectfully suggest that the workgroup consider applying the same 10% approach to both hospitals and the eligible professionals. Thank you very much for all your work.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Mark, and thank you to all the public for your comments. I'll turn it over to Dr. Tang.

Paul Tang – Palo Alto Medical Foundation – Internist, VP & CMIO
Yes thank you. Very rich discussion, and that's to the discussion of all the topics we talked about. Thank you to the people who held out, and for another productive day, and we will see you in June. Thanks a lot.

Public Comment Received During the Meeting

1. Our EHs don't "send" lab results electronically to outpatient providers. We give providers in the community electronic **access** to clinical data including structured lab results. I'm unclear how we would measure the "sending" of results to providers.

2. Question re: new proposed Stage 2 objective for "30% of EH patient days have at least one electronic note": Does this include transcribed dictated reports?

3. Is there any discussion on excusing certain specialists (e.g. radiologists, pathologists, etc) from the Meaningful Use program?

4. Shouldn't it read: 10% of patients/families have the capability to view and/or download their longitudinal..."? You cannot force a pt/family to view and/or download. The female commentator stated that "have the capability" should be added before download -- but it seems that it should be added before view.

5. If the View and Download requirement is required: The 10% should be removed with the requirement of the 10% view. Rather, whatever IT system is used will allow for all/100% of the patients access to it -- the provider cannot, however, force a pt to view his/her data -- you are placing undue burden on the provider. Has anyone on the measurement generation panel actually worked in a clinical administrative setting?

6. I am a Member of the Biomedical Informatics Think Tank (tm). LOINC is only a component of an important issue regarding a information standards. I think it is key that a national ontology standard is selected and enforced as a requirement for health information exchange.

7. What about information that is received after 36 hours after the encounter? Does this have a 4 day caveat as well?

8. I think patients should have a list of care team members, as well. This would allow patients to contact and know physicians and parties involved in their care.

9. Is there a guarantee that the Federal Government will have the revenue in the years ahead to cover the incentive payments to those providers who meet the program requirements?

10. Penalizing those who went to their boards and presented the case to purchase an EMR relying upon money from MU beginning in 2011 and have gone ahead and signed contracts will now have to pay for the EMR without the promised funds.. This will not bode well for future upgrade requests from boards.

11. Regarding slide 13 - postponing stage 2 for the early adopters allows time to develop the functionality that is needed for hospitals to meet the MU requirements while allowing hospitals to have enough time to implement and train their employees

12. Why can't you retain the current effective year for Stage 2 but add another year to meet Stage 1 during which time those who meet the requirements can still receive the incentive payment? This way, wouldn't you meet the needs of those who implement Stage 1 in 2011 as well as the IT vendors and smaller providers who need additional time to meet stage 1?

13. Please keep in mind the vendors that need the time to develop these requirements since the final requirements will not be available until June 2012. The vendors then need the time to work with hospitals to test, implement and train their employees. In order to provide the most benefit and best workflow, we need time to develop this right. Thanks.

14. Is there any concern that you will be able to identify which providers are honoring women's right to chose - abortions once all providers are in same data base along with procedures provided.

15. Without such a standard, aggregating health information for research purposes is very difficult...not just inefficient. Possibly the national ontology question could be addressed separately from meaningful use.